US Army Corps
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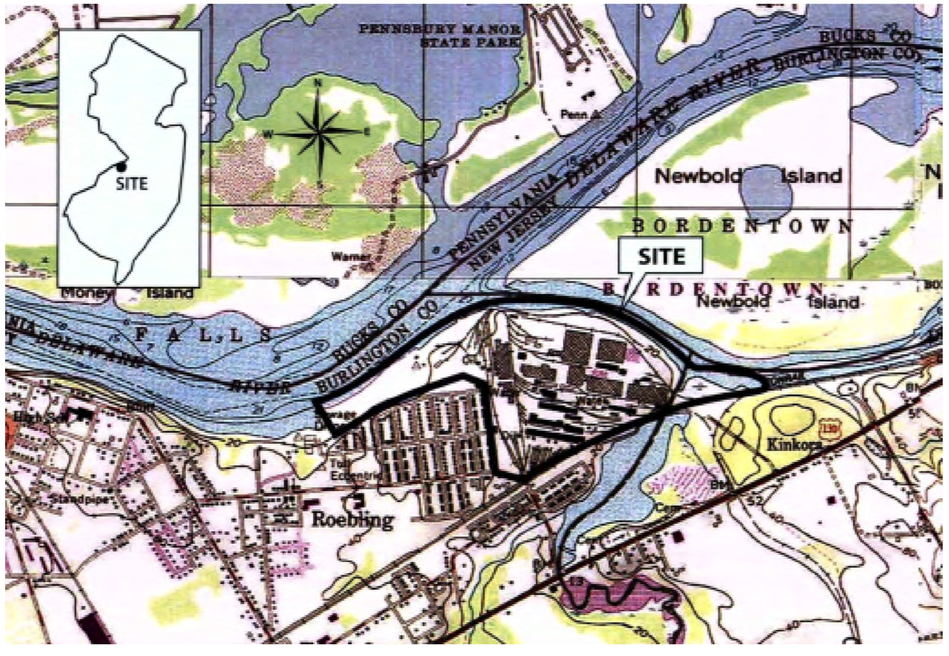
KANSAS CITY DISTRICT

AECOM

ROEBLING STEEL SUPERFUND SITE
EXISTING MILL YARD EQUIPMENT



SOLICITATION NO.: XXXXXX-XX-X-XXXX
CONTRACT NO.: W912DQ-D-15-3011
ISSUE DATE: AUGUST 2018

654823

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MARK	DESCRIPTION	DATE

DESIGNED BY: JP
DRAWN BY: CF
CHECKED BY: MK
SUBMITTED BY: CH
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U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

AECOM
100 RED SCHOOLHOUSE RD
CHESTNUT RIDGE, NY

ROEBLING STEEL SUPERFUND SITE
VILLAGE OF ROEBLING
FLORENCE TOWNSHIP, NJ
OPERABLE UNIT 4 - EXISTING MILL YARD EQUIPMENT
COVER SHEET AND INDEX OF DRAWINGS

SHEET ID
G-101

100% DESIGN

0 45 90 180 270 360 Feet

N

Reference: NJ 2015 Orthophotography downloaded from https://njgin.state.nj.us/

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U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

AECOM
100 RED SCHOOLHOUSE RD
CHESTNUT RIDGE, NY

ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

SITE PLAN

SHEET ID
G-102

100% DESIGN

GENERAL REQUIREMENTS:

1. AS PART OF THE BIDDING PROCESS THE CONTRACTOR MUST PROVIDE A LIST OF AT LEAST THREE PREVIOUS PROJECTS, SIMILAR IN SCOPE AND ARTIFACT TYPE.
2. THE DELIVERABLES LISTED IN TABLE G-003-1, THE SPECIFICATIONS, AND THE DESIGN ANALYSIS REPORT MUST BE SUBMITTED BY THE CONTRACTOR.
3. SOME OF THE WORK WILL INVOLVE TIGHT SPACES (E.G., UNDER THE CARRIAGES), THE PROPER MANAGEMENT TECHNIQUES AND PPE MUST BE SPECIFIED AND USED. CONFINED SPACE ENTRY PLANS (IF NECESSARY) MUST BE PREPARED AND SUBMITTED TO THE USACE PRIOR TO BEGINNING WORK.
4. LIFTING PLANS MUST BE PREPARED AND SUBMITTED TO THE USACE PRIOR TO BEGINNING WORK.
5. THE CONTRACTOR MUST ASSUME THE EXISTING PAINT IS LEAD BASED AND REMOVAL OF THE PAINT MUST COMPLY WITH ALL FEDERAL AND STATE REGULATIONS.
6. THE PUBLIC MUST BE PROTECTED FROM ALL HAZARDS RESULTING FROM CONSTRUCTION, INCLUDING BUT NOT LIMITED TO CHEMICAL AND PHYSICAL HAZARDS. THE SITE AND WORK AREAS MUST BE SECURED AT ALL TIMES AND THE NECESSARY PRECAUTIONS MUST BE TAKEN TO PROTECT THE PUBLIC FROM EXPOSURE TO ANY HAZARDS RESULTING FROM SITE WORK. THE WORK AREAS MUST BE CLEARLY DEFINED WITH BARRIERS AND ENCLOSURES, IF NECESSARY, TO PROTECT THE PUBLIC FROM ANY OF THE COMPONENTS OF THE RESTORATION PROCESS. LINERS AND FILTRATION SYSTEMS MUST BE USED TO COLLECT ANY MEDIUM THAT BECOMES AIRBORNE DURING THE RESTORATION PROCESS (E.G., AIR ABRASION MEDIA, RUST, ACIDS AND PAINT) FOR REMOVAL FROM THE SITE.
7. THE CONTRACTOR MUST SCHEDULE WORK TO MINIMIZE DISTURBANCE TO MUSEUM ACTIVITIES TO THE EXTENT PRACTICABLE. THE CONTRACTOR MUST NOT PERFORM ANY WORK DURING SPECIAL EVENTS AT THE MUSEUM.
8. WALNUT SHELL MEDIA AND SODIUM BICARBONATE MEDIA CAN BE APPLIED TO THE ARTIFACTS AT PRESSURES BETWEEN 85-100 PSI. THE OPERATOR MUST ADJUST THE BLASTER PSI STARTING AT THE LOW END OF THE RANGE AND PROGRESSING UP UNTIL THE MEDIA IS ADEQUATELY REMOVING BOTH PAINT AND RUST, BUT NOT HARMING THE ARTIFACT. AFTER THE RUST AND PAINT HAVE BEEN REMOVED FROM THE ARTIFACTS, THERE MUST BE NO FLAKING. THE SURFACE MUST BE SMOOTH WITH THE EXCEPTION OF EXISTING CORRODED PITTED HOLES. A SMALL AMOUNT OF RUST MAY REMAIN INSIDE THE PITTED HOLES.
9. PHOSPHORIC ACID AND TANNIC ACID TREATMENTS MUST BE APPLIED SEPARATELY. PHOSPHORIC ACID MUST BE APPLIED TO SMALL TEST AREAS FIRST. THE CONCENTRATION OF THE ACID MUST BE INCREASED UNTIL ALL THE RUST TURNS FROM AN ORANGE COLOR TO A PURPLE COLOR. THE PHOSPHORIC ACID TEST MUST BEGIN WITH AN INITIAL CONCENTRATION OF 20 PERCENT. THE CONCENTRATION SHALL BE INCREASED INCREMENTALLY, IF NECESSARY, UP TO 80-85 PERCENT. FOR ARTIFACTS THAT ARE BEING TREATED WITH TANNIC ACID, THE SAME TEST AREA MUST BE TESTED WITH TANNIC ACID STARTING WITH A CONCENTRATION OF 10 PERCENT UNTIL THE CONCENTRATION IS HIGH ENOUGH TO GRADUALLY TURN ALL THE AREAS BLACK. ONCE THE CORRECT CONCENTRATIONS OF THE ACIDS ARE DETERMINED, AT LEAST ONE COAT OF PHOSPHORIC ACID AND THREE COATS OF TANNIC ACID, WHERE SPECIFIED, MUST BE APPLIED. THE CONTRACTOR MUST WAIT UNTIL THE TREATED AREAS ARE FULLY DRY AND MUST THOROUGHLY INSPECT THE AREAS BETWEEN APPLICATIONS. ADDITIONAL APPLICATIONS OF TANNIC ACID MAY BE NECESSARY IF THE ARTIFACT IS NOT FULLY BLACK.
10. THE PAINT FOR THE LOCOMOTIVE AND CRANE MUST BE ALKYD PAINT. THE PAINT FOR THE OTHER ARTIFACTS, SUPPORTS AND CONRETE MUST BE LATEX PAINT.
11. THE PAINT FOR THE LOCOMOTIVE AND CRANE MUST BE HISTORIC COLORS APPROVED BY USACE. AT LEAST TWO COMPLETE COATINGS OF A (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION [OSHA] APPROVED) LOW LUSTER DIRECT TO METAL (D.T.M.) ALKYD PAINT SHALL BE APPLIED. THE PAINT SHALL BE AN INDUSTRIAL GRADE PAINT RATED FOR EXTERIOR USE ON METALS SUCH AS BENJAMIN MOORE®, SUPER SPEC HP® D.T.M. ALKYD LOW LUSTRE P23 OR EQUIVALENT.
12. THE PAINT FOR THE REMAINING ARTIFACTS AND ITEMS (E.G., SUPPORTS AND CONCRETE PADS) MUST BE LATEX-BASED. AT LEAST TWO COMPLETE COATINGS OF A (OSHA APPROVED) D.T.M. SAFETY PAINT MUST BE APPLIED TO THE ARTIFACTS. THE PAINT MUST BE AN INDUSTRIAL GRADE PAINT RATED FOR EXTERIOR USE ON METALS SUCH AS BENJAMIN MOORE, ULTRA SPEC (LATEX) D.T.M. HP25 OR EQUIVALENT. BLACK MATTE COLORING MUST BE USED THE ARTIFACTS. . THE CONCRETE PADS, SUPPORTS, AND FLYWHEEL STENCILS MUST BE PAINTED WITH EQUIVALENT PAINT IN NON-BLACK COLORS.
13. THE CONTRACTOR MUST WAIT AT LEAST ONE DAY AND UNTIL THE PAINT IS FULLY DRY AND INSPECT THE ARTIFACT OR ITEM BEFORE APPLYING ADDITIONAL COATS. MORE THAN THREE COATS MAY BE NECESSARY IF ALL AREAS OF THE ARTIFACT OR ITEM ARE NOT FULLY COVERED.
14. TEFLON PADS MUST BE PLACED BETWEEN THE ARTIFACTS AND ALL MODERN SUPPORTS TO PREVENT ANY FURTHER GALVANIC CORROSION. TEFLON PADS MUST ALSO BE PLACED BETWEEN THE ARTIFACTS AND CONCRETE, WHERE SPECIFIED, TO PREVENT FURTHER EROSION.
15. WOOD COMPONENTS THAT WERE HISTORICALLY ROUTINELY REPLACED MUST BE REPLACED WITH PRE-TREATED WOOD.

TABLE G-003-1

DELIVERABLE CATEGORY	TITLE
SD-01 PRECONSTRUCTION SUBMITTALS	
	CONTRACTOR REGULATIONS
	LIST OF CONTACT PERSONNEL
	PERSONNEL LIST
	VIEW LOCATION MAP
	PROGRESS AND COMPLETION PICTURES
	INITIAL PROJECT SCHEDULE
	PERIODIC SCHEDULE UPDATE
	SUBMITTAL REGISTER
	CONTRACTOR HEALTH AND SAFETY PLAN
	ACCIDENT PREVENTION PLAN (APP)
	CONTRACTOR QUALITY CONTROL (CQC) PLAN
	CONSTRUCTION SITE PLAN
	COMMUNITY AIR MONITORING PLAN
	REGULATORY NOTIFICATIONS
	ENVIRONMENTAL PROTECTION PLAN
	DIRT AND DUST CONTROL PLAN
	EMPLOYEE TRAINING RECORDS
	ENVIRONMENTAL MANAGER QUALIFICATIONS
	CONCRETE CURING PLAN
	QUALITY CONTROL PLAN
	QUALITY CONTROL PERSONNEL CERTIFICATIONS
	QUALITY CONTROL ORGANIZATIONAL CHART
	LABORATORY ACCREDITATION
	FORM REMOVAL SCHEDULE
	ERECTION DRAWINGS
	EQUIPMENT
	LIST OF PROPOSED SUBCONTRACTORS
	LIST OF PROPOSED PRODUCTS
	CERTIFICATES OF INSURANCE
SD-02 SHOP DRAWINGS	
	WORK ZONES
	FORMWORK
	REINFORCING STEEL
	FABRICATION DRAWINGS
	STENCIL
SD-03 PRODUCT DATA	
	AMENDMENTS TO THE APP/SSHP
	EXPOSURE MONITORING/AIR SAMPLING PROGRAM
	SITE CONTROL LOG
	SSHO'S DAILY INSPECTION LOGS
	VACUUM FILTERS
	RESPIRATORS
	JOINT SEALANTS
	JOINT FILLER
	MATERIALS FOR FORMS
	RECYCLED AGGREGATE MATERIALS
	CEMENTITIOUS MATERIALS
	CONCRETE CURING MATERIALS
	REINFORCEMENT
	LIQUID CHEMICAL FLOOR HARDENER
	ADMIXTURES
	MECHANICAL REINFORCING BAR CONNECTORS
	LOCAL/REGIONAL MATERIALS
	BIODEGRADABLE FORM RELEASE AGENT
	PUMPING CONCRETE
	FINISHING PLAN
	SHOP PRIMER
	WELDING ELECTRODES AND RODS
	NON-SHRINK GROUT
	WORK PLAN
	MATERIALS
	QUALIFICATIONS
	CERTIFICATION
	COATING
	MANUFACTURER'S TECHNICAL DATA SHEETS
	[SEALANT]
SD-04 SAMPLES	
	COLOR
SD-05 DESIGN DATA	
	DISCIPLINE-SPECIFIC CHECKLISTS
	DESIGN QUALITY CONTROL
	MIX DESIGN
	FORMWORK CALCULATIONS
	CONTAINMENT SYSTEM
SD-06 TEST REPORTS	
	MONTHLY EXPOSURE REPORTS
	NOTIFICATIONS AND REPORTS
	ACCIDENT REPORTS
	LHE INSPECTION REPORTS
	SAMPLING RESULTS
	OCCUPATIONAL AND ENVIRONMENTAL ASSESSMENT DATA REPORT
	CONCRETE MIX DESIGN
	FLY ASH
	POZZOLAN
	GROUND GRANULATED BLAST-FURNACE SLAG
	AGGREGATES
	TOLERANCE REPORT
	COMPRESSIVE STRENGTH TESTS
	UNIT WEIGHT OF STRUCTURAL CONCRETE
	ION CONCENTRATION
	AIR CONTENT

TABLE G-003-1 (CONTINUED)

DELIVERABLE CATEGORY	TITLE
SD-06 CERTIFICATES (CONTINUED)	
	SLUMP TESTS
	WATER
	CLASS B COATING
	BOLTS, NUTS, AND WASHERS
	WELD INSPECTION REPORTS
	EMBRITTLEMENT TEST REPORTS
SD-07 CERTIFICATES	
	CRANE OPERATORS/RIGGERS
	STANDARD LIFT PLAN
	ACTIVITY HAZARD ANALYSIS (AHA)
	CERTIFICATE OF COMPLIANCE
	LICENSE CERTIFICATES
	CERTIFICATE OF WORKER/VISITOR ACKNOWLEDGEMENT
	EMPLOYEE TRAINING RECORDS
	CERTIFICATE OF COMPETENCY
	QUALIFICATIONS OF CP
	TESTING LABORATORY
	OCCUPANT NOTIFICATION
	TRAINING CERTIFICATION
	NOTIFICATION OF THE COMMENCEMENT OF [LBP] HAZARD ABATEMENT
	THIRD PARTY CONSULTANT QUALIFICATIONS
	LEAD-BASED PAINT/PAINT WITH LEAD REMOVAL/CONTROL PLAN
	RENTAL EQUIPMENT NOTIFICATION
	RESPIRATORY PROTECTION PROGRAM
	HAZARD COMMUNICATION PROGRAM
	EPA APPROVED HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL
	FACILITY
	LEAD WASTE MANAGEMENT PLAN
	VACUUM FILTERS
	CLEARANCE CERTIFICATION
	REINFORCING BARS
	WELDER QUALIFICATIONS
	SILICA FUME MANUFACTURER'S REPRESENTATIVE
	VOC CONTENT FOR FORM RELEASE AGENTS, CURING COMPOUNDS, AND CONCRETE PENETRATING SEALERS
	SAFETY DATA SHEETS
	FOREST STEWARDSHIP COUNCIL (FSC) CERTIFICATION
	FIELD TESTING TECHNICIAN AND TESTING AGENCY
	STEEL
	BOLTS, NUTS, AND WASHERS
	GALVANIZING
	AISC FABRICATION PLANT QUALITY CERTIFICATION
	AISC ERECTOR QUALITY CERTIFICATION
	WELDING PROCEDURES AND QUALIFICATIONS
	WELDING ELECTRODES AND RODS
	WORK PLAN
	APPLICATOR'S QUALIFICATIONS
	QUALIFICATION TESTING
	CONTRACT ERRORS, OMISSIONS, AND OTHER DISCREPANCIES
	CORRECTIVE ACTION PROCEDURES
	COATING WORK PLAN
	QUALIFICATIONS OF CERTIFIED INDUSTRIAL HYGIENIST (CIH)
	QUALIFICATIONS OF INDIVIDUALS PERFORMING ABRASIVE BLASTING
	QUALIFICATIONS OF COATING CONTRACTORS
	JOINT SEALANT MATERIALS
	COATING MATERIALS
	COATING SYSTEM COMPONENT COMPATIBILITY
	NON-METALLIC ABRASIVE
SD-08 MANUFACTURER'S INSTRUCTIONS	
	INSTRUCTIONS
	CURING COMPOUND
	APPLICATION INSTRUCTIONS
	MIXING
	MANUFACTURER'S SAFETY DATA SHEETS
	JOINT SEALANT INSTRUCTIONS
	COATING SYSTEM INSTRUCTIONS
	VERTICAL OVERHEAD REPAIR MORTAR INSTRUCTIONS
	CONCRETE TOPPINGS
	CONCRETE RESURFACING INSTRUCTIONS
	CONCRETE REHABILITATION
	EPOXY INSTRUCTIONS
SD-10 OPERATION AND MAINTENANCE DATA	
	COATINGS:
SD-11 CLOSEOUT SUBMITTALS	
	SAFETY AND HEALTH PHASE-OUT REPORT
	WASTE DETERMINATION DOCUMENTATION
	DISPOSAL DOCUMENTATION FOR HAZARDOUS AND REGULATED WASTE
	ASSEMBLED EMPLOYEE TRAINING RECORDS
	HAZARDOUS WASTE/DEBRIS MANAGEMENT
	REGULATORY NOTIFICATIONS
	SALES DOCUMENTATION
	CONTRACTOR CERTIFICATION
	AS-BUILT RECORD OF EQUIPMENT AND MATERIALS
	FINAL APPROVED SHOP DRAWINGS
	HAZARDOUS WASTE MANIFEST
	MEDICAL EXAMINATIONS
	TRAINING CERTIFICATION
	TURN-IN DOCUMENTS OR WEIGHT TICKETS
	DISPOSAL OF USED ABRASIVE
	INSPECTION LOGBOOK

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ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

GENERAL REQUIREMENTS

SHEET ID
G-103

100% DESIGN

CODES:

1. AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ACI 318-14"
2. ASCE 7-14 - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
3. AISC STEEL DESIGN GUIDE 1 BASE PLATE AND ANCHOR ROD DESIGN, 2ND EDITION
4. AISC 360 STEEL CONSTRUCTION MANUAL 2016
5. AWS D1.1 AMERICAN WELDING SOCIETY 2015

MATERIAL NOTES:

1.	STRUCTURAL STEEL PLATES	ASTM572 GR. 50
2.	CAST IN PLACE CONCRETE COMPRESSIVE STRENGTH) NORMAL WT.	4KSI (28 DAY
3.	CONCRETE REINFORCEMENT	ASTM A615, GRADE 60
4.	WELDING ELECTRODES	70XX LOW HYDROGEN
5.	HEX HEADED ANCHOR BOLTS	ASTM F1554
6.	STEEL ANGLE	ASTM A36
7.	STEEL HSS SECTION	ASTM A500 GR. B
8.	BOLTS AND FASTENERS	ASTM A325

GENERAL NOTES:

1. THE WORK ON THIS CONTRACT SHALL COMPLY WITH ALL THE REQUIREMENTS OF ALL APPLICABLE CODES.

2. CONTRACTOR SHALL VISIT THE JOB SITE TO DETERMINE ACTUAL CONDITIONS AND MAKE HIS OWN ESTIMATE OF THE COMPLEXITY ASSOCIATED WITH THE PERFORMANCE AND COMPLETION OF THE PROPOSED WORK. AMONG OTHER FACTORS, THE CONTRACTOR SHALL INCLUDE IN HIS BID ACCESS OF EQUIPMENT AND MATERIALS TO THE AFFECTED AREAS, AND AVAILABILITY OF LIGHT AND POWER, ETC.

3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS, DESIGN CALCULATION REPORT, AND OTHER CONSTRUCTION DOCUMENTS. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS AND OTHER DOCUMENTS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF RECORD (EOR) PRIOR TO PERFORMING WORK.

4. ALL AREAS DAMAGED, DISTURBED OR OTHERWISE AFFECTED BY THE CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER.

5. ALL CONTRACTORS SHALL EXAMINE THE DRAWINGS AND SPECIFICATIONS CAREFULLY, VISIT THE SITE, FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, PRIOR TO SUBMITTING THE PROPOSAL. FAILURE TO VISIT THE SITE AND NOT FAMILIARIZING WITH THE EXISTING CONDITIONS AND LIMITATIONS WILL IN NO WAY RELIEVE THE SUCCESSFUL BIDDER FROM FURNISHING ANY MATERIALS OR PERFORMING ANY WORK THAT MAY BE REQUIRED TO COMPLETE WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS, WITHOUT ADDITIONAL COST TO OWNER.

6. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE SAFETY AND INTEGRITY OF EXISTING ARTIFACTS, SUPPORTS, AND FOOTINGS.

7. AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS OF THE JOBSITE INCLUDING SAFETY OF PERSONS AND PROPERTY. THE ENGINEER'S PRESENCE OR REVIEW OF WORK DOES NOT INCLUDE THE ADEQUACY OF THE CONTRACTOR'S MEANS OR METHODS OF CONSTRUCTION.

13. CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS RELATED TO THE NEW WORK AND SHALL REPORT DISCREPANCIES, IF ANY, TO THE EOR, PRIOR TO THE FABRICATION OF ANY MATERIALS. VERIFY ALL FIELD DIMENSIONS BY MEASUREMENT AT THE JOB SITE BEFORE SUBMITTING SHOP DRAWINGS.

14. SCALES SHOWN ON THE DRAWINGS ARE FOR GENERAL INFORMATION ONLY. NO DIMENSION SHALL BE SCALED FROM THE DRAWINGS.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL WORK AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" AND THE 13TH EDITION AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS," INCLUDING THE "COMMENTARY" AND SUPPLEMENTS.

2. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE ABOVE AISC SPECIFICATION.

3. THE CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS RELATED TO THE FABRICATION AND ERECTION OF NEW STEEL AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCEMENT OF THE WORK.

4. THE CONTRACTOR SHALL NOT REPRODUCE CONTRACT DRAWINGS FOR USE AS SHOP DRAWINGS.

5. ALL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED WITH PAINT FINISH.

6. THE CONTRACTOR AND HIS SUBCONTRACTORS MUST SUBMIT IN WRITING ANY REQUEST FOR MODIFICATIONS TO THE PLANS. SHOP DRAWINGS THAT ARE SUBMITTED TO THE ENGINEER FOR THE REVIEW DO NOT CONSTITUTE, "IN WRITING", UNLESS IT IS BROUGHT TO THE ATTENTION OF THE ENGINEER THAT SPECIFIC CHANGES ARE BEING SUGGESTED. CHANGES TO THE PLANS BY MEANS OF SHOP DRAWINGS SHALL BECOME THE RESPONSIBILITY OF THE PERSON INITIATING SUCH CHANGES.

7. WELDING SHALL BE IN ACCORDANCE WITH THE AWS D1.1 STRUCTURAL WELDING CODE.

8. WELDING ELECTRODES SHALL BE E70XX.

9. EACH WELDER, TACKER, AND WELDING OPERATOR MUST BE CERTIFIED BY TEST WITHIN THE PAST SIX MONTHS TO PERFORM THE TYPE OF WORK REQUIRED IN CONFORMANCE WITH THE AWS D1.1 STRUCTURAL WELDING CODE.

10. ALL CONNECTIONS SHALL BE BOLTED WITH ASTM A325 HIGH STRENGTH BOLTS OR WELDED IN ACCORDANCE TO AWS D1.1-STRUCTURAL WELDING CODE AND WITH THE REQUIREMENTS OF THE AISC MANUAL UNO.

11. FURNISH AND INSTALL ONE HARDENED WASHER AND HEAVY HEX NUT WITH ALL STRUCTURAL CONNECTION BOLTS AND ANCHOR BOLTS, UNLESS OTHERWISE INDICATED ON THE DRAWING.

12. CONTRACTOR SHALL LEVEL BASE PLATES BY LEVELING CORROSION RESISTANT STAINLESS STEEL NUTS.

13. ALL STIFFENER PLATES SHALL BE PROVIDED IN PAIRS, EACH SIDE OF POSTS, U.O.N.

14. PRIOR TO DETAILING STRUCTURAL STEEL, THE FABRICATOR SHALL SUBMIT PLANS AND CONFIRM ALL DIMENSIONS.

CONCRETE - DESIGN:

1. AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ACI 318-14 USING LOAD FACTORS AND STRENGTH REDUCTION FACTORS.
2. CODES AND STANDARDS FOR REINFORCED CONCRETE.
   - ACI-318-14 AND COMMENTARY. BUILDING CODE REQUIREMENTS.
   - ACI-304 RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING , AND PLACING CONCRETE.
   - ACI-305 RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING.
   - ACI-306 RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING.
   - ACI-309 RECOMMENDED PRACTICE FOR CONSOLIDATION OF CONCRETE.
   - ACI-311 RECOMMENDED PRACTICE FOR CONCRETE INSPECTION.
   - ACI-347 BUILDING CODE REQUIREMENTS FOR FORMWORK FOR REINFORCED CONCRETE.

4. CONCRETE SHALL REACH AT LEAST 75% OF ITS 28-DAY COMPRESSIVE STRENGTH (f'c) BEFORE FORMS MAY BE REMOVED.
5. CONCRETE SHALL BE AIR-ENTRAINED NORMAL WEIGHT CONCRETE WITH MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS AND A MAXIMUM WATER CEMENT RATIO OF 0.40.
6. SUBMIT PROPOSED MIX DESIGNS WITH PRELIMINARY TEST RESULTS TO THE ENGINEER OF RECORD AND THE SPECIAL INSPECTIONS INSPECTOR. CONCRETE SHALL NOT BE PLACED UNTIL MIXES HAVE BEEN APPROVED.
7. ALL CONCRETE USED IN THE STRUCTURE SHALL CONFORM IN ALL RESPECTS TO THE MATERIAL AND PROPORTIONS OF THESE MATERIALS USED IN THE APPROVED DESIGN MIX. THE USE OF ANY ADDITIVES NOT PRESENT IN THE APPROVED DESIGN MIX IS PROHIBITED.
8. CONSTRUCTION JOINT IS NOT ALLOWED IN THE FOUNDATION. CONTRACTOR SHALL COORDINATE WITH EOR IF HE DEEMS IT IS NECESSARY TO HAVE CONSTRUCTION JOINT.
9. CAST IN PLACE CONCRETE SHALL SATISFY FOLLOWING REQUIREMENTS:

   A) SLUMP (MAXIMUM) 3" PRIOR TO THE ADDITION OF WATER REDUCERS AND 9" AFTER WATER REDUCERS PROVIDED NO SEGREGATION
   B) AIR CONTENT 6 % (BY VOLUME) % - 0,+1 ½
   C) COARSE AGGREGATES CLEAN AND SHARP CONFORMING TO ASTM C33
   D) FINE AGGREGATE CLEAN AND SHARP CONFORMING TO ASTM C33

CONCRETE PROTECTION FOR REINFORCEMENT:

1. THE MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE PER ACI 318-11, CHAPTER 07, PAR. 7.7.
2. MINIMUM COVER FOR REINFORCING IN NON-PRE-STRESSED CONCRETE AND NON-POST-TENSIONED SHALL BE AS FOLLOWING UNO:

   MEMBERS. CONCRETE COVER:

   CONCRETE PLACED AGAINST EARTH 3"

3. CONCRETE EXPOSED TO EARTH OR WEATHER
   - o #5 BAR OR SMALLER 1 ½"
   - o #6 BAR OR LARGER 2"

4. CONCRETE NOT EXPOSED TO EARTH OR GROUND
   - o COLUMNS (TIES AND MAIN REINFORCING) 1 ½"
   - o SLABS, WALLS, JOISTS #14 AND #18 1 ½"
   - o SLABS, WALLS. JOISTS #11 AND SMALLER ¾"
   - o BEAMS (STIRRUPS AND MAIN REINF.) 1 ½"
5. CLEAR COVER SHOULD BE CLEARLY SHOWN ON ALL REBAR FABRICATION DRAWINGS.
6. ALL OTHER DIMENSIONS SHOWN FOR LOCATION OF REINFORCING STEEL ARE TO THE FACE OF BARS AND DENOTE MINIMUM CLEAR COVER.

CONCRETE REINFORCEMENT:

1. ALL REINFORCING BARS SHALL BE DEFORMED BILLET STEEL BARS AND SHALL CONFORM TO ASTM A615 GRADE 60.

2. THE CONTRACTOR SHALL SUBMIT CHECKED SHOP DRAWINGS CONSISTING OF COMPLETE PLANS AND DETAILS OF REINFORCEMENT, LOCATIONS OF POUR LINES, FOR APPROVAL BEFORE PROCEEDING WITH THE WORK.

3. ALL DETAILING. FABRICATION AND ERECTION OF REINFORCING BARS SHALL COMPLY WITH THE REQUIREMENTS OF ACI 315 AND ACI 318.

4. ALL SPLICES SHALL BE IN ACCORDANCE WITH ACI 318-14. THE LOCATIONS SHALL BE INDICATED ON THE SHOP DRAWINGS AND APPROVED BY THE ENGINEER OF RECORD. GENERALLY, ALL SPLICES SHALL BE STAGGERED AND LOCATED AWAY FROM THE SECTION OF MAXIMUM TENSILE STRESS. DO NOT SPLICES THE BAR WITHIN 4' OF CENTER LINE OF EACH POST. DO NOT SPLICE BARS WITHIN 4 FT FROM THE ENDS OF THE TIE BEAMS.

5. CONTRACTOR SHALL ENSURE THAT REINFORCEMENT IS FULLY DEVELOPED IF IT DISCONTINUES. DEVELOPMENT LENGTH SHALL BE IN ACCORDANCE WITH ACI318-16.

6. ALL REINFORCEMENT SHALL BE ACCURATELY PLACED AND SECURELY WIRED TO PREVENT DISLOCATION FROM PROPER POSITION.

FOUNDATION AND SITEWORK NOTES:

1. CONTRACTOR TO DIG TEST PIT OR PERFORM SOIL BORING TO CONFIRM EXISTING SOIL AT FOOTING LOCATIONS TO BE FREE OF VOIDS, ORGANIC MATERIALS, AND DEBRIS. TEST PIT/SOIL BORING LOCATION SHALL BE NO FURTHER THAN 20 FEET FROM ANY NEW FOOTINGS.

2. ALL MATERIAL, FABRICATION, INSTALLATION, AND INSPECTION REQUIREMENTS RELATING TO FOUNDATIONS SHALL CONFORM TO THE IBC 2015.

3. ALL FOOTINGS SHALL BE PLACED ON DRY SOIL. ALL EXCAVATIONS SHALL BE ADEQUATELY DEWATERED PRIOR TO POURING OF CONCRETE.

4. THE STRUCTURAL BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95 % OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557.

5. PROVIDE AND ACCURATELY SET ANCHOR BOLTS WHEN CONCRETE IS POURED. SEE DETAILS.

6. FOUNDATIONS SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.

7. IF THE WATER TABLE IS ABOVE THE BOTTOM OF EXCAVATIONS, CONTRACTOR SHALL DEWATER THE SITE.

CONCRETE TESTING AND INSPECTION:

1. THE CRITERIA FOR EVALUATION AND ACCEPTANCE OF CONCRETE AND THE FREQUENCY OF CONDUCTING STRENGTH TESTS OF CONCRETE SHALL BE IN ACCORDANCE WITH ACI318-14.

2. SEVEN (7) TEST CYLINDERS WILL BE MOLDED FOR EACH 50 CUBIC YARDS OR FRACTION THEREOF FOR EACH TYPE AND STRENGTH OF CONCRETE PLACED IN ANY ONE DAY'S CONCRETING. ONE (1) CYLINDER WILL BE TESTED AT 7 DAYS AND THREE (3) CYLINDERS TESTED AT 28 DAYS. IF STRENGTH IS NOT MET, REMAINING THREE CYLINDERS ARE TO BE USED FOR TESTING AT A LATER DATE.

3. IN ADDITION, CONCRETE TEST CYLINDERS WILL BE MADE FROM CONCRETE TAKEN OUT OF THE BUCKET, HOPPER OR FORMS AS DIRECTED BY SPECIAL INSPECTOR WHEN CONCRETE IS PLACED FROM AN INTERMEDIATE CONVEYANCE. THESE TEST CYLINDERS SHALL BE SEPARATE AND DISTINCT FROM THOSE MADE FROM THE MIXER AND SHALL BE MADE FROM THE SAME BATCH, CURED AND TESTED IN THE SAME MANNER AS DESCRIBED FOR THE SAMPLES TAKEN FROM THE MIXER.

4. WHEN CONCRETE IS PLACED DIRECTLY FROM THE MIXER INTO THE FORMS, WITHOUT ANY INTERMEDIATE CONVEYANCE, THE ABOVE ADDITIONAL CYLINDERS WILL NOT BE REQUIRED.

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DESIGNED BY: SA
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SUBMITTED BY: SA
SIZE: ANSI D

U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

AECOM
100 RED SCHOOLHOUSE RD
CHESTNUT RIDGE, NY

ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

GENERAL NOTES (1 OF 2)

SHEET ID
S-001

DESIGN 100%

5. THE CONTRACTOR WILL PERFORM THE NECESSARY TESTING, INSPECTIONS AND REPORTING REQUIRED BY THE DESIGN SPECIFICATIONS.

POST-INSTALLED ANCHORS

1. EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES AS PROVIDED BY HILTI, INC. CONTACT HILTI AT (800) 879-8000 FOR PRODUCT RELATED QUESTIONS.

a) ANCHORAGE TO CONCRETE

i) ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:

(1) HILTI HIT-HY 200 SAFE SET SYSTEM WITH THE HILTI HIT-Z ROD PER ICC ESR-3187

(2) HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC 20/40 VACUUM (VC 20-U OR VC 40-U) SYSTEM WITH HAS-E THREADED ROD PER ICC ESR-3187

(3) HILTI HIT-RE 500 V3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC 20/40 VACUUM (VC 20-U OR VC 40-U) WITH HAS-E THREADED ROD PER ICC ESR-3814

(4) HILTI HIT-RE 500 V3 SAFE SET SYSTEM WITH HILTI ROUGHENING TOOL (TE-YRT) WITH HAS-E THREADED ROD PER ICC ESR-3814 FOR DIAMOND CORED HOLES

ii) MEDIUM DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:

(1) HILTI KWIK HUS EZ AND KWIK HUS EZ-I SCREW ANCHORS

(2) HILTI KWIK BOLT-TZ EXPANSION ANCHORS PER ICC ESR-3027

(3) HILTI KWIK BOLT-TZ EXPANSION ANCHORS DIAMETERS 3/8", 1/2" AND 5/8" WITH HILTI ADAPTIVE TORQUE SYSTEM (SIW-6AT-A22 Impact Wrench Tool body and SI-AT-A22 Adaptive Torque Module) PER ICC ESR-1917

(4) HILTI KWIK BOLT 3 EXPANSION ANCHORS (UNCRACKED CONCRETE ONLY) PER ICC ESR-2302

(5) HILTI KWIK BOLT 3 EXPANSION ANCHORS DIAMETERS 3/8", 1/2" AND 5/8" WITH HILTI ADAPTIVE TORQUE SYSTEM (SIW-6AT-A22 Impact Wrench Tool body and SI-AT-A22 Adaptive Torque Module) (UNCRACKED CONCRETE ONLY) PER ICC ESR-2302

iii) HEAVY DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:

(1) HILTI HDA UNDERCUT ANCHORS PER ICC ESR 1546

(2) HILTI HSL-3 EXPANSION ANCHORS PER ICC ESR 1545

PER ICC ESR-3027

2. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE.

ESR-1917

3. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.

4. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.

6. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

EPOXY WELD:

1- CONTRACTOR SHALL APPLY EPOXY WELD AS NOTED ON DRAWINGS RELATED TO FORKLIFT SUPPORT.

2- SURFACE PREPARATION FOR EPOXY WELD SHALL BE IN ACCORDANCE WITH THE MANUFACTURER.

3- MINIMUM SHEAR STRENGTH OF EPOXY WELD SHALL BE 2500 PSI AND MAXIMUM ELONGATION AT BREAK SHALL BE 8%.

4- EPOXY WELD SHALL BE APPLIED TO THE HORIZONTAL CONTACT SURFACES BETWEEN THE ANGLE SEATS LEG AND THE ARTIFACT AXLES. IN CASE SHIMMING IS PROVIDED, THE SHIM SHALL BE WELDED TO THE SUPPORTING STEEL USING STANDARD WELD AND THE CONTACT BETWEEN THE SHIM AND ARTIFACT SHALL BE EPOXY WELDED.

5- MIN. OF 90 IN2 PER POST SHALL BE EPOXY WELDED TO THE ARTIFACT.

ABBREVIATIONS

BOT	BOTTOM
CL	CENTERLINE
CLR	CLEAR
CONC	CONCRETE
DIA	DIAMETER
DWGS	DRAWINGS
EW	EACH WAY
EQ	EQUAL
OPNG	OPENING
PL	PLATE
REINF	REINFORCEMENT
T.O	TOP OF
T&B	TOP & BOTTOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
W/	WITH

LEGEND

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ROEBLING STEEL SUPERFUND SITE
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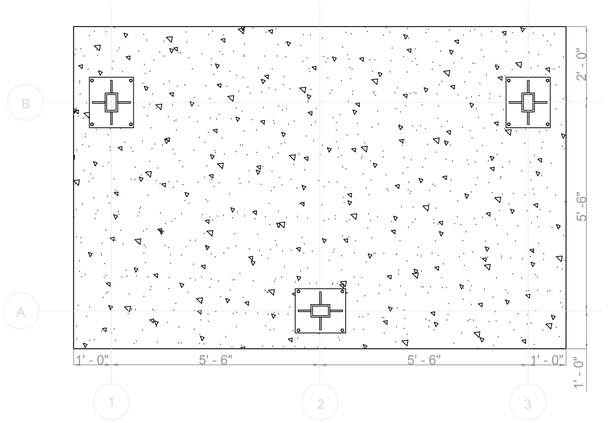
EXISTING MILL YARD EQUIPMENT

GENERAL NOTES (2 OF 2)

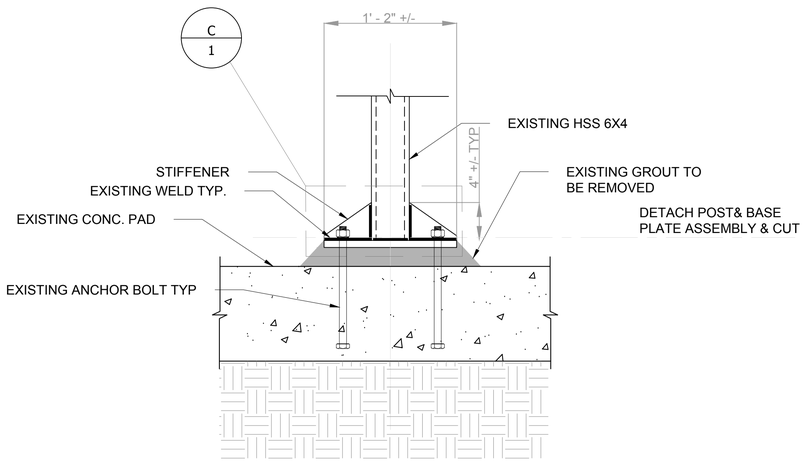
SHEET ID
S-002

DESIGN 100%



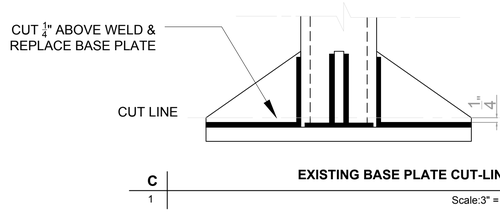
A 1 — **SLAG POT FOUNDATION PLAN**

Scale: 1" = 1'-0"



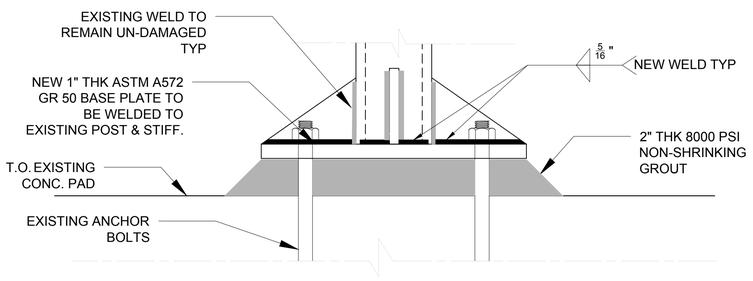
B 1 — **SLAG POT EXISTING BASE PLATE DETAIL**

Scale:1 1/2" = 1'-0"



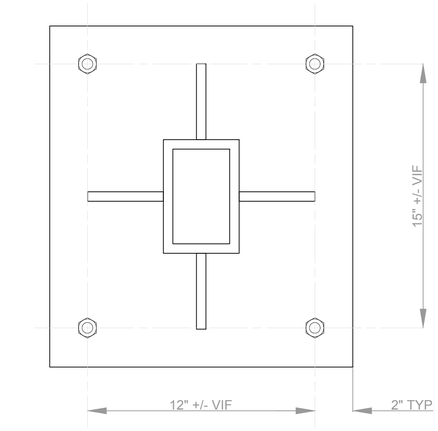
C 1 — **EXISTING BASE PLATE CUT-LINE**

Scale:3" = 1'-0"



D 1 — **NEW BASE PLATE DETAILS**

Scale:3" = 1'-0"



E 1 — **NEW BASE PLATE PLAN VIEW**

Scale:3" = 1'-0"

NOTES:

1. INFORMATION PROVIDED ON THIS SKETCH MERELY PERTAINS TO THE ADEQUACY OF EXISTING BASE PLATES AND PROVIDES PROVISIONS ON REPLACEMENT OF THE EXISTING BASE PLATES WITH ADEQUATELY SIZED AND DETAILED BASED PLATES.
2. IT IS ASSUMED THAT THE BALANCE OFCOMPONENTS OF THE SUPPORTING STRUCTURE INCLUDING THE POSTS, ANCHORS, CONNECTIONS, ETC ARE APPROPRIATELY DESIGNED PER APPLICABLE CODES BY OTHERS.
3. DESIGN OF THE BASE PLATE AND THE WELDS ARE PERFORMED PER AISC 360 -2010 AND AISC BASE PLATE AND ANCHORROD DESIGN (SECOND ED.).
4. OVERALL WEIGHT OF THE SLAG POT AND ITS GEOMETRICAL INFORMATION IS ADOPTED FROM THE PREVIOUS DESIGN CALCULATIONS. AN OVERALL WEIGHT OF 34 KIPS IS USED IN CURRENT DESIGN.
5. SEISMIC FORCE CALCULATIONS ARE PERFORMED IN ACCORDANCE WITH AISC 7-10.
   SEISMIC DESIGN CRITERIA IS AS FOLLOWS:
   Ss: 0.226 g PER ASCE 7-10
   S1: 0.099g PER ASCE 7-10
   SITE CLASS: "D"
   SEISMIC DESIGN CATEGORY: "B"
   RESPONSE MODIFICATION FACTOR "R": 1
   OVERSTRENGTH FACTOR (W0): 1
   DEFLECTION AMPLIFICATION FACTOR "Cd": 1
   LATERAL LOAD RESISTING SYSTEM: ORDINARY STEEL FRAME
   SEISMIC BASE SHEAR COEFFICIENT: 23% (IN BOTH ORTHOGONAL DIRECTIONS)
6. THE ANCHOR BOLTS SPACING SHOWN IN THIS SKETCH SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD; THEREOF THE BASE PLATES DIMENSIONS SHALL BE DETERMINED CONSIDERING 2" OF BOLT EDGE DISTANCE FROM THE BOLT CENTER.
7. WELDING SHALL BE PERFORMED BY A CERTIFIED WELDER USING E70XX IN ACCORDANCE WITH AWS D1.1.
8. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO ENSURE THAT THE EXISTING POSTS WILL NOT BE DAMAGED DURING THE CUTTING PROCESS.
9. POSTS SHALL NOT BE HEATED DURING CUTTING PROCESS AND CONTRACTOR SHALL ADOPT APPROPRIATE MEANS AND METHODS TO AVOID HEATING THE STEEL MEMBERS DURING THE CUTTING PROCESS.
10. ALL THE SUPPORTS SHALL BE HOT DIP GALVANIZED AFTER THE EXISTING BASE PLATES ARE REPLACED WITH THE NEW ONES.
11. CONTRACTOR SHALL USE STAINLESS STEEL SETTING NUTS TO LEVEL THE BASE PLATES
12. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGING THE ANCHOR BOLTS. CONTRACTOR SHALL NOTIFY USACE IF ANCHOR BOLT IS DAMAGED DURING REMOVAL OF THE EXISTING POSTS.
13. NEW WELD OVERLAP WITH THE EXISTING WELD LINE IS NOT ALLOWED.

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SUBMITTED BY: J.H.	
SIZE: ANSI D	

U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

AECOM
100 RED SCHOOLHOUSE RD
CHESTNUT RIDGE, NY

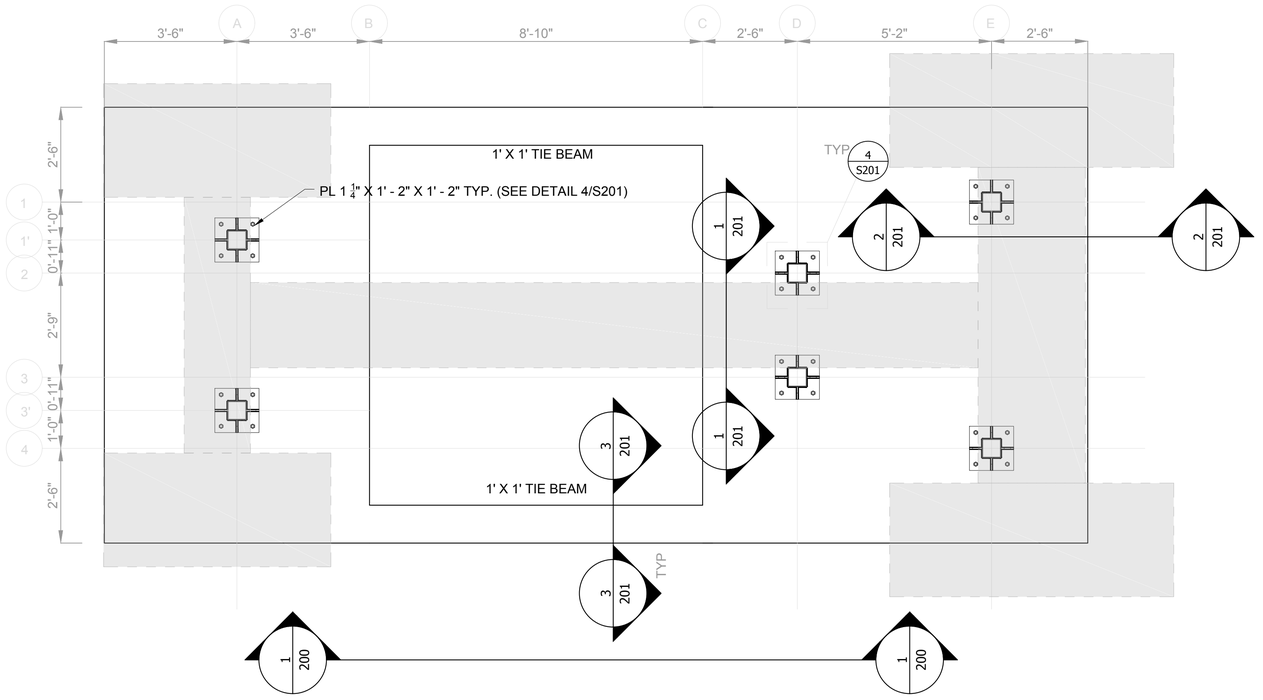
ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

SLAG POT BASE PLATES REPLACEMENT

SHEET ID

S-100

DRAFT - 100% DESIGN



1 S-200 **FORKLIFT SUPPORT FOUNDATION PLAN**

Scale: 1/2" = 1'-0"

FORKLIFT GENERAL NOTES:

1. AT THE TIME OF SUPPORT DESIGN NO EXISTING WEIGHT INFORMATION ON THE FORKLIFT HAS BEEN PRESENTED. THE SHOWN DESIGN IS BASED ON A SIMILAR MODEL PROVIDED BY THE MANUFACTURER.
2. DIMENSIONS SHOWN ON THE DRAWING IS BASED ON APPROXIMATE FIELD MEASUREMENTS. CONTRACTOR SHALL CONFIRM THE DIMENSIONS IN THE FIELD TO LOCATE THE ACCURATE POSITION OF EACH POST.
3. SUPPORTS ARE PROVIDED AT THE FRONT, REAR, AND LONGITUDINAL AXLES. IT IS ASSUMED THAT THE AXLES ARE IN FULL WORKING CONDITION AND ABLE TO CARRY THE LOADS THAT WOULD BE TRANSFERRED TO THEM IN OPERATION. CONTRACTOR SHALL INVESTIGATE STRUCTURAL INTEGRITY OF THE FORKLIFT PRIOR TO LIFTING AND ENSURE THAT ITS STABILITY WILL NOT BE COMPROMISED AFTER BEING PLACED ON SUPPORTS.
4. OPERATING WEIGHT OF FORKLIFT IS ASSUMED TO BE 109 KIPS AND AXLE LOAD IS ASSUMED TO BE 70% OF OVERALL WEIGHT.
5. SEISMIC LOAD CRITERIA (NON-BUILDING STRUCTURES SIMILAR TO BUILDINGS):

   Ss: 0.212 g PER ASCE 7-10

   S1: 0.062g PER ASCE 7-10

   SITE CLASS: "D"

   SEISMIC DESIGN CATEGORY: "B"

   RESPONSE MODIFICATION FACTOR "R": 1

   OVERSTRENGTH FACTOR (W0): 1

   DEFLECTION AMPLIFICATION FACTOR "Cd": 1

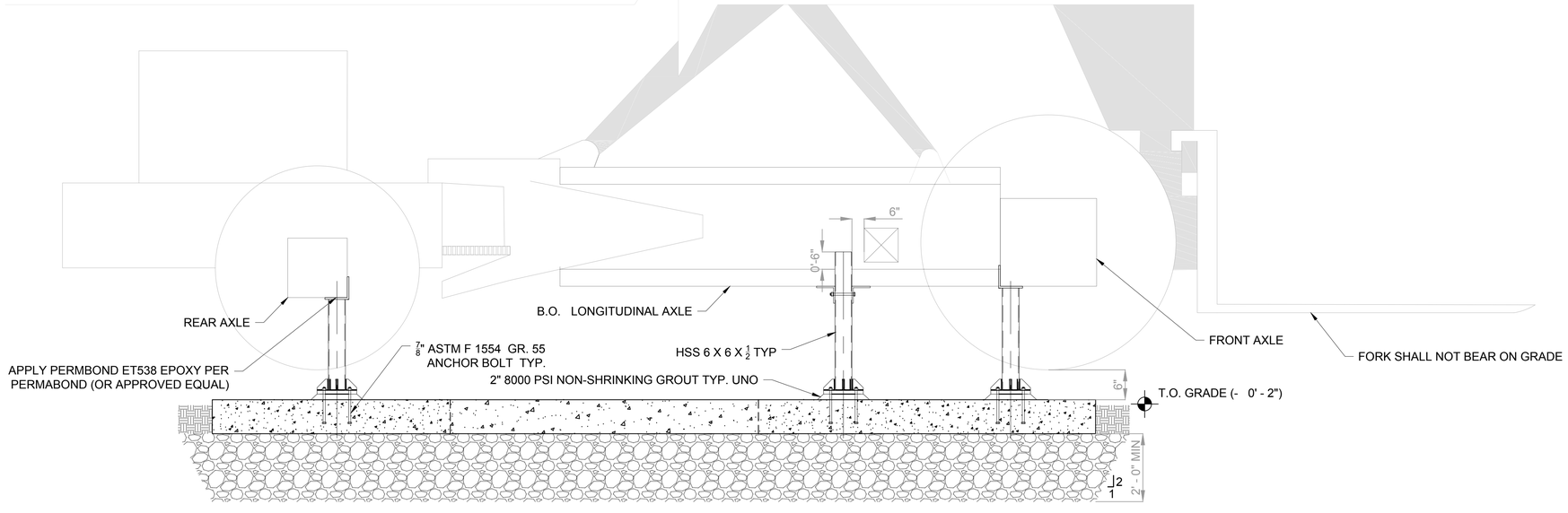
   SEISMIC INTERSTORY DRIFT LIMIT: 0.02h

   OVERALL TORSIONAL ECCENTRICITY: 5% SEISMIC FORCE IN LONG DIRECTION

   50% SEISMIC FORCE IN SHORT DIRECTION

   LATERAL LOAD RESISTING SYSTEM: ORDINARY STEEL FRAME

   SEISMIC BASE SHEAR COEFFICIENT: 21.2%
6. FRONT AND REAR AXLES SHALL BE EPOXY WELDED TO THE SUPPORTS.
7. VERTICAL LEG OF ANGLE SEATS SHALL BE IN FULL CONTACT WITH THE AXLES. NO MORE THAN 1/8" GAP IS ALLOWED. CONTRACTOR SHALL PROVIDE SHIMMING TO FILL ALL GAPS LESS THAN 1/8".
8. ALL ADDED STEEL SUPPORT AND ANCHOR RODS SHALL BE HOT DIPPED GALVANIZED (HDG).
9. FOUNDATION DESIGNED ASSUMING 1500 PSF NET BEARING CAPACITY DUE TO "DL+SDL + LL" AND 2500 PSF DUE TO "DL+SDL + E".
10. BACKFILL SHALL BE PLACED IN MAX. 6" LAYERS AND COMPACTED WITH A VIBRATING COMPACTOR TO MIN. 95% OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT.
11. THE CONTRACTOR WILL NOT EXCAVATE BELOW THE DEMARCATION LAYER OF THE CAP.



1 S-200 **FORKLIFT SUPPORT & FOUNDATION ELEVATION**

Scale: 1/2" = 1'-0"

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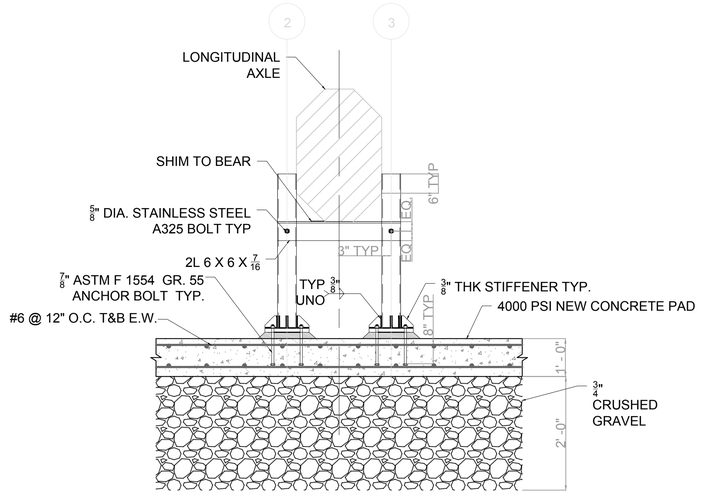
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

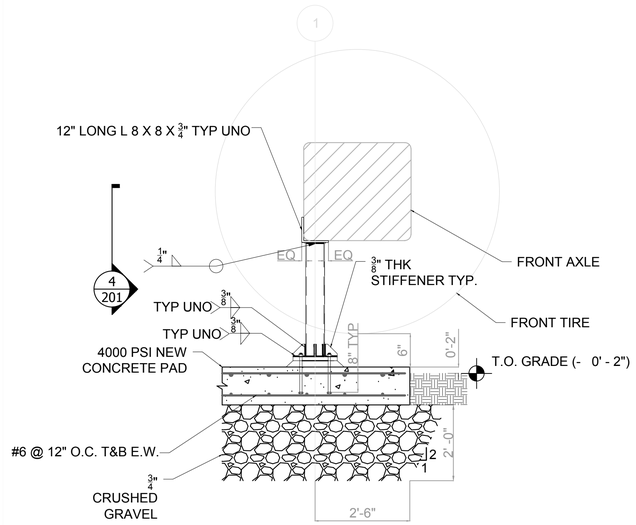
FORKLIFT SUPPORT PLAN AND ELEVATION

SHEET ID
S-200

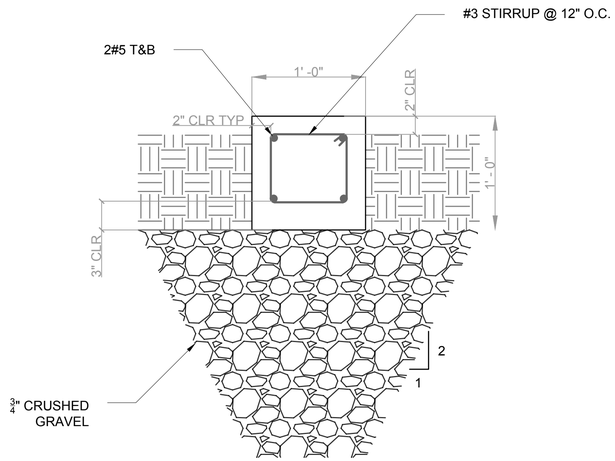
DESIGN 100%



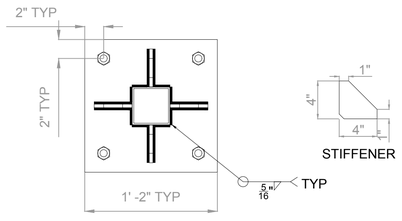
1 S-201 — **FORKLIFT SUPPORT SECTION**
Scale: 1/2" = 1'-0"



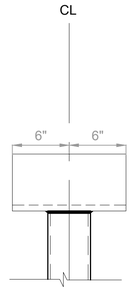
2 S-201 — **FORKLIFT SUPPORT SECTION**
Scale: 1/2" = 1'-0"



3 S-201 — **TIE BEAM SECTION**
Scale: 1 1/2" = 1'-0"



3 S-201 — **BASE PLATE DETAIL**
Scale: 1 1/2" = 1'-0"



3 S-201 — **SUPPORT CONNECTION DETAIL**
Scale: 1 1/2" = 1'-0"

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EXISTING MILL YARD EQUIPMENT

FORKLIFT SUPPORT SECTIONS AND DETAILS

SHEET ID
S-201

DESIGN 100%

CODES:

1. AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ACI 318-14"
2. ASCE 7-14 - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
3. AISC STEEL DESIGN GUIDE 1 BASE PLATE AND ANCHOR ROD DESIGN, 2ND EDITION
4. AISC 360 STEEL CONSTRUCTION MANUAL 2016
5. AWS D1.1 AMERICAN WELDING SOCIETY 2015

MATERIAL NOTES:

1.	STRUCTURAL STEEL PLATES	ASTM572 GR. 50
2.	CAST IN PLACE CONCRETE COMPRESSIVE STRENGTH) NORMAL WT.	4KSI (28 DAY
3.	CONCRETE REINFORCEMENT	ASTM A615, GRADE 60
4.	WELDING ELECTRODES	70XX LOW HYDROGEN
5.	HEX HEADED ANCHOR BOLTS	ASTM F1554
6.	STEEL ANGLE	ASTM A36
7.	STEEL HSS SECTION	ASTM A500 GR. B
8.	BOLTS AND FASTENERS	ASTM A325

GENERAL NOTES:

1. THE WORK ON THIS CONTRACT SHALL COMPLY WITH ALL THE REQUIREMENTS OF ALL APPLICABLE CODES.

2. CONTRACTOR SHALL VISIT THE JOB SITE TO DETERMINE ACTUAL CONDITIONS AND MAKE HIS OWN ESTIMATE OF THE COMPLEXITY ASSOCIATED WITH THE PERFORMANCE AND COMPLETION OF THE PROPOSED WORK. AMONG OTHER FACTORS, THE CONTRACTOR SHALL INCLUDE IN HIS BID ACCESS OF EQUIPMENT AND MATERIALS TO THE AFFECTED AREAS, AND AVAILABILITY OF LIGHT AND POWER, ETC.

3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS, DESIGN CALCULATION REPORT, AND OTHER CONSTRUCTION DOCUMENTS. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS AND OTHER DOCUMENTS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF RECORD (EOR) PRIOR TO PERFORMING WORK.

4. ALL AREAS DAMAGED, DISTURBED OR OTHERWISE AFFECTED BY THE CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER.

5. ALL CONTRACTORS SHALL EXAMINE THE DRAWINGS AND SPECIFICATIONS CAREFULLY, VISIT THE SITE, FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, PRIOR TO SUBMITTING THE PROPOSAL. FAILURE TO VISIT THE SITE AND NOT FAMILIARIZING WITH THE EXISTING CONDITIONS AND LIMITATIONS WILL IN NO WAY RELIEVE THE SUCCESSFUL BIDDER FROM FURNISHING ANY MATERIALS OR PERFORMING ANY WORK THAT MAY BE REQUIRED TO COMPLETE WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS, WITHOUT ADDITIONAL COST TO OWNER.

6. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE SAFETY AND INTEGRITY OF EXISTING ARTIFACTS, SUPPORTS, AND FOOTINGS.

7. AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS OF THE JOBSITE INCLUDING SAFETY OF PERSONS AND PROPERTY. THE ENGINEER'S PRESENCE OR REVIEW OF WORK DOES NOT INCLUDE THE ADEQUACY OF THE CONTRACTOR'S MEANS OR METHODS OF CONSTRUCTION.

13. CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS RELATED TO THE NEW WORK AND SHALL REPORT DISCREPANCIES, IF ANY, TO THE EOR, PRIOR TO THE FABRICATION OF ANY MATERIALS. VERIFY ALL FIELD DIMENSIONS BY MEASUREMENT AT THE JOB SITE BEFORE SUBMITTING SHOP DRAWINGS.

14. SCALES SHOWN ON THE DRAWINGS ARE FOR GENERAL INFORMATION ONLY. NO DIMENSION SHALL BE SCALED FROM THE DRAWINGS.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL WORK AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" AND THE 13TH EDITION AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS," INCLUDING THE "COMMENTARY" AND SUPPLEMENTS.

2. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE ABOVE AISC SPECIFICATION.

3. THE CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS RELATED TO THE FABRICATION AND ERECTION OF NEW STEEL AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCEMENT OF THE WORK.

4. THE CONTRACTOR SHALL NOT REPRODUCE CONTRACT DRAWINGS FOR USE AS SHOP DRAWINGS.

5. ALL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED WITH PAINT FINISH.

6. THE CONTRACTOR AND HIS SUBCONTRACTORS MUST SUBMIT IN WRITING ANY REQUEST FOR MODIFICATIONS TO THE PLANS. SHOP DRAWINGS THAT ARE SUBMITTED TO THE ENGINEER FOR THE REVIEW DO NOT CONSTITUTE, "IN WRITING", UNLESS IT IS BROUGHT TO THE ATTENTION OF THE ENGINEER THAT SPECIFIC CHANGES ARE BEING SUGGESTED. CHANGES TO THE PLANS BY MEANS OF SHOP DRAWINGS SHALL BECOME THE RESPONSIBILITY OF THE PERSON INITIATING SUCH CHANGES.

7. WELDING SHALL BE IN ACCORDANCE WITH THE AWS D1.1 STRUCTURAL WELDING CODE.

8. WELDING ELECTRODES SHALL BE E70XX.

9. EACH WELDER, TACKER, AND WELDING OPERATOR MUST BE CERTIFIED BY TEST WITHIN THE PAST SIX MONTHS TO PERFORM THE TYPE OF WORK REQUIRED IN CONFORMANCE WITH THE AWS D1.1 STRUCTURAL WELDING CODE.

10. ALL CONNECTIONS SHALL BE BOLTED WITH ASTM A325 HIGH STRENGTH BOLTS OR WELDED IN ACCORDANCE TO AWS D1.1-STRUCTURAL WELDING CODE AND WITH THE REQUIREMENTS OF THE AISC MANUAL UNO.

11. FURNISH AND INSTALL ONE HARDENED WASHER AND HEAVY HEX NUT WITH ALL STRUCTURAL CONNECTION BOLTS AND ANCHOR BOLTS, UNLESS OTHERWISE INDICATED ON THE DRAWING.

12. CONTRACTOR SHALL LEVEL BASE PLATES BY LEVELING CORROSION RESISTANT STAINLESS STEEL NUTS.

13. ALL STIFFENER PLATES SHALL BE PROVIDED IN PAIRS, EACH SIDE OF POSTS, U.O.N.

14. PRIOR TO DETAILING STRUCTURAL STEEL, THE FABRICATOR SHALL SUBMIT PLANS AND CONFIRM ALL DIMENSIONS.

CONCRETE - DESIGN:

1. AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ACI 318-14 USING LOAD FACTORS AND STRENGTH REDUCTION FACTORS.
2. CODES AND STANDARDS FOR REINFORCED CONCRETE.
   - ACI-318-14 AND COMMENTARY. BUILDING CODE REQUIREMENTS.
   - ACI-304 RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING , AND PLACING CONCRETE.
   - ACI-305 RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING.
   - ACI-306 RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING.
   - ACI-309 RECOMMENDED PRACTICE FOR CONSOLIDATION OF CONCRETE.
   - ACI-311 RECOMMENDED PRACTICE FOR CONCRETE INSPECTION.
   - ACI-347 BUILDING CODE REQUIREMENTS FOR FORMWORK FOR REINFORCED CONCRETE.

4. CONCRETE SHALL REACH AT LEAST 75% OF ITS 28-DAY COMPRESSIVE STRENGTH (f'c) BEFORE FORMS MAY BE REMOVED.
5. CONCRETE SHALL BE AIR-ENTRAINED NORMAL WEIGHT CONCRETE WITH MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS AND A MAXIMUM WATER CEMENT RATIO OF 0.40.
6. SUBMIT PROPOSED MIX DESIGNS WITH PRELIMINARY TEST RESULTS TO THE ENGINEER OF RECORD AND THE SPECIAL INSPECTIONS INSPECTOR. CONCRETE SHALL NOT BE PLACED UNTIL MIXES HAVE BEEN APPROVED.
7. ALL CONCRETE USED IN THE STRUCTURE SHALL CONFORM IN ALL RESPECTS TO THE MATERIAL AND PROPORTIONS OF THESE MATERIALS USED IN THE APPROVED DESIGN MIX. THE USE OF ANY ADDITIVES NOT PRESENT IN THE APPROVED DESIGN MIX IS PROHIBITED.
8. CONSTRUCTION JOINT IS NOT ALLOWED IN THE FOUNDATION. CONTRACTOR SHALL COORDINATE WITH EOR IF HE DEEMS IT IS NECESSARY TO HAVE CONSTRUCTION JOINT.
9. CAST IN PLACE CONCRETE SHALL SATISFY FOLLOWING REQUIREMENTS:

   A) SLUMP (MAXIMUM) 3" PRIOR TO THE ADDITION OF WATER REDUCERS AND 9" AFTER WATER REDUCERS PROVIDED NO SEGREGATION
   B) AIR CONTENT 6 % (BY VOLUME) % - 0,+1 ½
   C) COARSE AGGREGATES CLEAN AND SHARP CONFORMING TO ASTM C33
   D) FINE AGGREGATE CLEAN AND SHARP CONFORMING TO ASTM C33

CONCRETE PROTECTION FOR REINFORCEMENT:

1. THE MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE PER ACI 318-11, CHAPTER 07, PAR. 7.7.
2. MINIMUM COVER FOR REINFORCING IN NON-PRE-STRESSED CONCRETE AND NON-POST-TENSIONED SHALL BE AS FOLLOWING UNO:

   MEMBERS. CONCRETE COVER:

   CONCRETE PLACED AGAINST EARTH 3"

3. CONCRETE EXPOSED TO EARTH OR WEATHER
   - o #5 BAR OR SMALLER 1 ½"
   - o #6 BAR OR LARGER 2"

4. CONCRETE NOT EXPOSED TO EARTH OR GROUND
   - o COLUMNS (TIES AND MAIN REINFORCING) 1 ½"
   - o SLABS, WALLS, JOISTS #14 AND #18 1 ½"
   - o SLABS, WALLS. JOISTS #11 AND SMALLER ¾"
   - o BEAMS (STIRRUPS AND MAIN REINF.) 1 ½"
5. CLEAR COVER SHOULD BE CLEARLY SHOWN ON ALL REBAR FABRICATION DRAWINGS.
6. ALL OTHER DIMENSIONS SHOWN FOR LOCATION OF REINFORCING STEEL ARE TO THE FACE OF BARS AND DENOTE MINIMUM CLEAR COVER.

CONCRETE REINFORCEMENT:

1. ALL REINFORCING BARS SHALL BE DEFORMED BILLET STEEL BARS AND SHALL CONFORM TO ASTM A615 GRADE 60.

2. THE CONTRACTOR SHALL SUBMIT CHECKED SHOP DRAWINGS CONSISTING OF COMPLETE PLANS AND DETAILS OF REINFORCEMENT, LOCATIONS OF POUR LINES, FOR APPROVAL BEFORE PROCEEDING WITH THE WORK.

3. ALL DETAILING. FABRICATION AND ERECTION OF REINFORCING BARS SHALL COMPLY WITH THE REQUIREMENTS OF ACI 315 AND ACI 318.

4. ALL SPLICES SHALL BE IN ACCORDANCE WITH ACI 318-14. THE LOCATIONS SHALL BE INDICATED ON THE SHOP DRAWINGS AND APPROVED BY THE ENGINEER OF RECORD. GENERALLY, ALL SPLICES SHALL BE STAGGERED AND LOCATED AWAY FROM THE SECTION OF MAXIMUM TENSILE STRESS. DO NOT SPLICES THE BAR WITHIN 4' OF CENTER LINE OF EACH POST. DO NOT SPLICE BARS WITHIN 4 FT FROM THE ENDS OF THE TIE BEAMS.

5. CONTRACTOR SHALL ENSURE THAT REINFORCEMENT IS FULLY DEVELOPED IF IT DISCONTINUES. DEVELOPMENT LENGTH SHALL BE IN ACCORDANCE WITH ACI318-16.

6. ALL REINFORCEMENT SHALL BE ACCURATELY PLACED AND SECURELY WIRED TO PREVENT DISLOCATION FROM PROPER POSITION.

FOUNDATION AND SITEWORK NOTES:

1. CONTRACTOR TO DIG TEST PIT OR PERFORM SOIL BORING TO CONFIRM EXISTING SOIL AT FOOTING LOCATIONS TO BE FREE OF VOIDS, ORGANIC MATERIALS, AND DEBRIS. TEST PIT/SOIL BORING LOCATION SHALL BE NO FURTHER THAN 20 FEET FROM ANY NEW FOOTINGS.

2. ALL MATERIAL, FABRICATION, INSTALLATION, AND INSPECTION REQUIREMENTS RELATING TO FOUNDATIONS SHALL CONFORM TO THE IBC 2015.

3. ALL FOOTINGS SHALL BE PLACED ON DRY SOIL. ALL EXCAVATIONS SHALL BE ADEQUATELY DEWATERED PRIOR TO POURING OF CONCRETE.

4. THE STRUCTURAL BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95 % OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557.

5. PROVIDE AND ACCURATELY SET ANCHOR BOLTS WHEN CONCRETE IS POURED. SEE DETAILS.

6. FOUNDATIONS SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.

7. IF THE WATER TABLE IS ABOVE THE BOTTOM OF EXCAVATIONS, CONTRACTOR SHALL DEWATER THE SITE.

CONCRETE TESTING AND INSPECTION:

1. THE CRITERIA FOR EVALUATION AND ACCEPTANCE OF CONCRETE AND THE FREQUENCY OF CONDUCTING STRENGTH TESTS OF CONCRETE SHALL BE IN ACCORDANCE WITH ACI318-14.

2. SEVEN (7) TEST CYLINDERS WILL BE MOLDED FOR EACH 50 CUBIC YARDS OR FRACTION THEREOF FOR EACH TYPE AND STRENGTH OF CONCRETE PLACED IN ANY ONE DAY'S CONCRETING. ONE (1) CYLINDER WILL BE TESTED AT 7 DAYS AND THREE (3) CYLINDERS TESTED AT 28 DAYS. IF STRENGTH IS NOT MET, REMAINING THREE CYLINDERS ARE TO BE USED FOR TESTING AT A LATER DATE.

3. IN ADDITION, CONCRETE TEST CYLINDERS WILL BE MADE FROM CONCRETE TAKEN OUT OF THE BUCKET, HOPPER OR FORMS AS DIRECTED BY SPECIAL INSPECTOR WHEN CONCRETE IS PLACED FROM AN INTERMEDIATE CONVEYANCE. THESE TEST CYLINDERS SHALL BE SEPARATE AND DISTINCT FROM THOSE MADE FROM THE MIXER AND SHALL BE MADE FROM THE SAME BATCH, CURED AND TESTED IN THE SAME MANNER AS DESCRIBED FOR THE SAMPLES TAKEN FROM THE MIXER.

4. WHEN CONCRETE IS PLACED DIRECTLY FROM THE MIXER INTO THE FORMS, WITHOUT ANY INTERMEDIATE CONVEYANCE, THE ABOVE ADDITIONAL CYLINDERS WILL NOT BE REQUIRED.

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CONTRACT NO.: W912DQ-D-15-3011

DESIGNED BY: SA
DRAWN BY: SA
CHECKED BY: CS
SUBMITTED BY: SA
SIZE: ANSI D

U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

AECOM
100 RED SCHOOLHOUSE RD
CHESTNUT RIDGE, NY

ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

GENERAL NOTES (1 OF 2)

SHEET ID
S-001

DESIGN 100%

5. THE CONTRACTOR WILL PERFORM THE NECESSARY TESTING, INSPECTIONS AND REPORTING REQUIRED BY THE DESIGN SPECIFICATIONS.

POST-INSTALLED ANCHORS

1. EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES AS PROVIDED BY HILTI, INC. CONTACT HILTI AT (800) 879-8000 FOR PRODUCT RELATED QUESTIONS.

a) ANCHORAGE TO CONCRETE

i) ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:

(1) HILTI HIT-HY 200 SAFE SET SYSTEM WITH THE HILTI HIT-Z ROD PER ICC ESR-3187

(2) HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC 20/40 VACUUM (VC 20-U OR VC 40-U) SYSTEM WITH HAS-E THREADED ROD PER ICC ESR-3187

(3) HILTI HIT-RE 500 V3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC 20/40 VACUUM (VC 20-U OR VC 40-U) WITH HAS-E THREADED ROD PER ICC ESR-3814

(4) HILTI HIT-RE 500 V3 SAFE SET SYSTEM WITH HILTI ROUGHENING TOOL (TE-YRT) WITH HAS-E THREADED ROD PER ICC ESR-3814 FOR DIAMOND CORED HOLES

ii) MEDIUM DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:

(1) HILTI KWIK HUS EZ AND KWIK HUS EZ-I SCREW ANCHORS

(2) HILTI KWIK BOLT-TZ EXPANSION ANCHORS PER ICC ESR-3027

(3) HILTI KWIK BOLT-TZ EXPANSION ANCHORS DIAMETERS 3/8", 1/2" AND 5/8" WITH HILTI ADAPTIVE TORQUE SYSTEM (SIW-6AT-A22 Impact Wrench Tool body and SI-AT-A22 Adaptive Torque Module) PER ICC ESR-1917

(4) HILTI KWIK BOLT 3 EXPANSION ANCHORS (UNCRACKED CONCRETE ONLY) PER ICC ESR-2302

(5) HILTI KWIK BOLT 3 EXPANSION ANCHORS DIAMETERS 3/8", 1/2" AND 5/8" WITH HILTI ADAPTIVE TORQUE SYSTEM (SIW-6AT-A22 Impact Wrench Tool body and SI-AT-A22 Adaptive Torque Module) (UNCRACKED CONCRETE ONLY) PER ICC ESR-2302

iii) HEAVY DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:

(1) HILTI HDA UNDERCUT ANCHORS PER ICC ESR 1546

(2) HILTI HSL-3 EXPANSION ANCHORS PER ICC ESR 1545

PER ICC ESR-3027

2. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE.

ESR-1917

3. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.

4. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.

6. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

EPOXY WELD:

1- CONTRACTOR SHALL APPLY EPOXY WELD AS NOTED ON DRAWINGS RELATED TO FORKLIFT SUPPORT.

2- SURFACE PREPARATION FOR EPOXY WELD SHALL BE IN ACCORDANCE WITH THE MANUFACTURER.

3- MINIMUM SHEAR STRENGTH OF EPOXY WELD SHALL BE 2500 PSI AND MAXIMUM ELONGATION AT BREAK SHALL BE 8%.

4- EPOXY WELD SHALL BE APPLIED TO THE HORIZONTAL CONTACT SURFACES BETWEEN THE ANGLE SEATS LEG AND THE ARTIFACT AXLES. IN CASE SHIMMING IS PROVIDED, THE SHIM SHALL BE WELDED TO THE SUPPORTING STEEL USING STANDARD WELD AND THE CONTACT BETWEEN THE SHIM AND ARTIFACT SHALL BE EPOXY WELDED.

5- MIN. OF 90 IN2 PER POST SHALL BE EPOXY WELDED TO THE ARTIFACT.

ABBREVIATIONS

BOT	BOTTOM
CL	CENTERLINE
CLR	CLEAR
CONC	CONCRETE
DIA	DIAMETER
DWGS	DRAWINGS
EW	EACH WAY
EQ	EQUAL
OPNG	OPENING
PL	PLATE
REINF	REINFORCEMENT
T.O	TOP OF
T&B	TOP & BOTTOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
W/	WITH

LEGEND

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U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

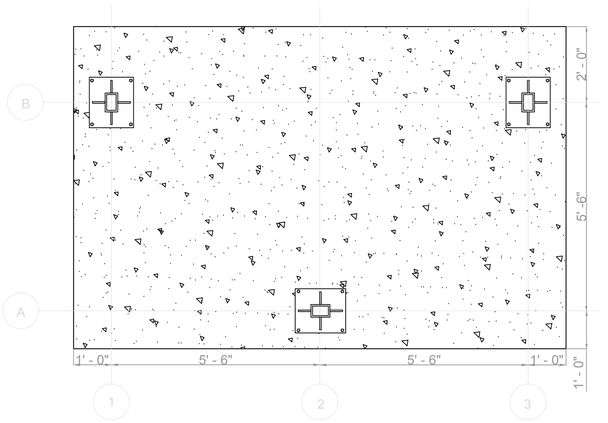
AECOM
100 RED SCHOOLHOUSE RD
CHESTNUT RIDGE, NY

ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

GENERAL NOTES (2 OF 2)

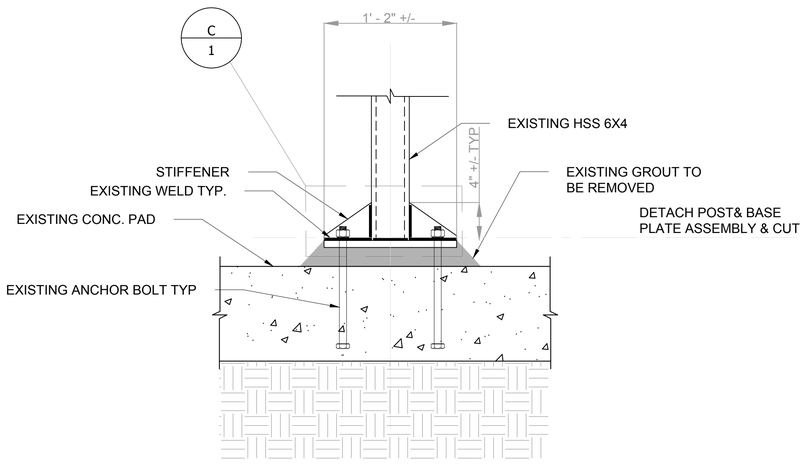
SHEET ID
S-002

DESIGN 100%



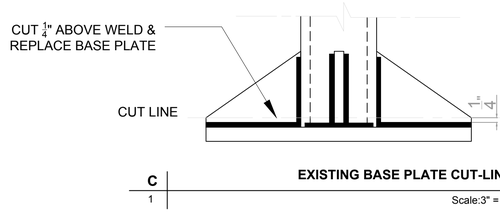
A 1 — **SLAG POT FOUNDATION PLAN**

Scale: 1" = 1'-0"



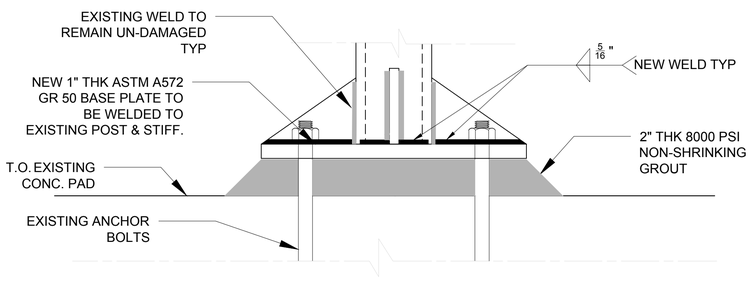
B 1 — **SLAG POT EXISTING BASE PLATE DETAIL**

Scale:1 1/2" = 1'-0"



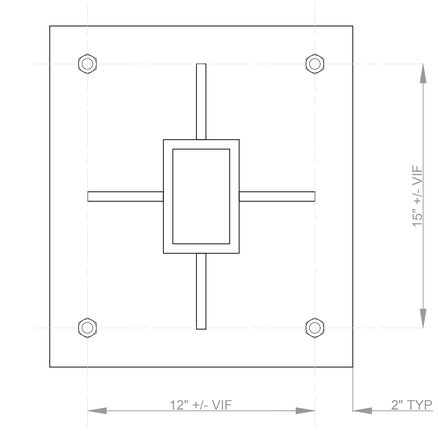
C 1 — **EXISTING BASE PLATE CUT-LINE**

Scale:3" = 1'-0"



D 1 — **NEW BASE PLATE DETAILS**

Scale:3" = 1'-0"



E 1 — **NEW BASE PLATE PLAN VIEW**

Scale:3" = 1'-0"

NOTES:

1. INFORMATION PROVIDED ON THIS SKETCH MERELY PERTAINS TO THE ADEQUACY OF EXISTING BASE PLATES AND PROVIDES PROVISIONS ON REPLACEMENT OF THE EXISTING BASE PLATES WITH ADEQUATELY SIZED AND DETAILED BASED PLATES.
2. IT IS ASSUMED THAT THE BALANCE OFCOMPONENTS OF THE SUPPORTING STRUCTURE INCLUDING THE POSTS, ANCHORS, CONNECTIONS, ETC ARE APPROPRIATELY DESIGNED PER APPLICABLE CODES BY OTHERS.
3. DESIGN OF THE BASE PLATE AND THE WELDS ARE PERFORMED PER AISC 360 -2010 AND AISC BASE PLATE AND ANCHORROD DESIGN (SECOND ED.).
4. OVERALL WEIGHT OF THE SLAG POT AND ITS GEOMETRICAL INFORMATION IS ADOPTED FROM THE PREVIOUS DESIGN CALCULATIONS. AN OVERALL WEIGHT OF 34 KIPS IS USED IN CURRENT DESIGN.
5. SEISMIC FORCE CALCULATIONS ARE PERFORMED IN ACCORDANCE WITH AISC 7-10.
   SEISMIC DESIGN CRITERIA IS AS FOLLOWS:
   Ss: 0.226 g PER ASCE 7-10
   S1: 0.099g PER ASCE 7-10
   SITE CLASS: "D"
   SEISMIC DESIGN CATEGORY: "B"
   RESPONSE MODIFICATION FACTOR "R": 1
   OVERSTRENGTH FACTOR (W0): 1
   DEFLECTION AMPLIFICATION FACTOR "Cd": 1
   LATERAL LOAD RESISTING SYSTEM: ORDINARY STEEL FRAME
   SEISMIC BASE SHEAR COEFFICIENT: 23% (IN BOTH ORTHOGONAL DIRECTIONS)
6. THE ANCHOR BOLTS SPACING SHOWN IN THIS SKETCH SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD; THEREOF THE BASE PLATES DIMENSIONS SHALL BE DETERMINED CONSIDERING 2" OF BOLT EDGE DISTANCE FROM THE BOLT CENTER.
7. WELDING SHALL BE PERFORMED BY A CERTIFIED WELDER USING E70XX IN ACCORDANCE WITH AWS D1.1.
8. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO ENSURE THAT THE EXISTING POSTS WILL NOT BE DAMAGED DURING THE CUTTING PROCESS.
9. POSTS SHALL NOT BE HEATED DURING CUTTING PROCESS AND CONTRACTOR SHALL ADOPT APPROPRIATE MEANS AND METHODS TO AVOID HEATING THE STEEL MEMBERS DURING THE CUTTING PROCESS.
10. ALL THE SUPPORTS SHALL BE HOT DIP GALVANIZED AFTER THE EXISTING BASE PLATES ARE REPLACED WITH THE NEW ONES.
11. CONTRACTOR SHALL USE STAINLESS STEEL SETTING NUTS TO LEVEL THE BASE PLATES
12. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGING THE ANCHOR BOLTS. CONTRACTOR SHALL NOTIFY USACE IF ANCHOR BOLT IS DAMAGED DURING REMOVAL OF THE EXISTING POSTS.
13. NEW WELD OVERLAP WITH THE EXISTING WELD LINE IS NOT ALLOWED.

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SUBMITTED BY: J.H.	
SIZE: ANSI D	

U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

AECOM
100 RED SCHOOLHOUSE RD
CHESTNUT RIDGE, NY

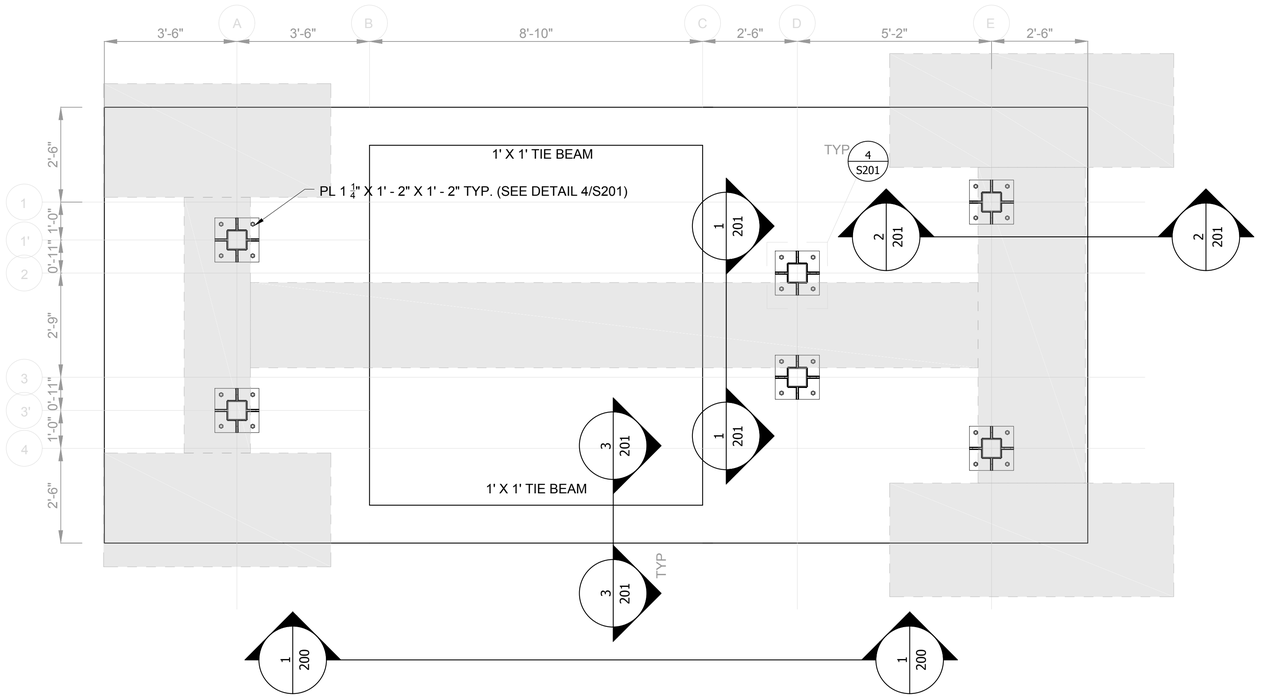
ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

SLAG POT BASE PLATES REPLACEMENT

SHEET ID

S-100

DRAFT - 100% DESIGN



1 S-200 **FORKLIFT SUPPORT FOUNDATION PLAN**

Scale: 1/2" = 1'-0"

FORKLIFT GENERAL NOTES:

1. AT THE TIME OF SUPPORT DESIGN NO EXISTING WEIGHT INFORMATION ON THE FORKLIFT HAS BEEN PRESENTED. THE SHOWN DESIGN IS BASED ON A SIMILAR MODEL PROVIDED BY THE MANUFACTURER.
2. DIMENSIONS SHOWN ON THE DRAWING IS BASED ON APPROXIMATE FIELD MEASUREMENTS. CONTRACTOR SHALL CONFIRM THE DIMENSIONS IN THE FIELD TO LOCATE THE ACCURATE POSITION OF EACH POST.
3. SUPPORTS ARE PROVIDED AT THE FRONT, REAR, AND LONGITUDINAL AXLES. IT IS ASSUMED THAT THE AXLES ARE IN FULL WORKING CONDITION AND ABLE TO CARRY THE LOADS THAT WOULD BE TRANSFERRED TO THEM IN OPERATION. CONTRACTOR SHALL INVESTIGATE STRUCTURAL INTEGRITY OF THE FORKLIFT PRIOR TO LIFTING AND ENSURE THAT ITS STABILITY WILL NOT BE COMPROMISED AFTER BEING PLACED ON SUPPORTS.
4. OPERATING WEIGHT OF FORKLIFT IS ASSUMED TO BE 109 KIPS AND AXLE LOAD IS ASSUMED TO BE 70% OF OVERALL WEIGHT.
5. SEISMIC LOAD CRITERIA (NON-BUILDING STRUCTURES SIMILAR TO BUILDINGS):

   Ss: 0.212 g PER ASCE 7-10

   S1: 0.062g PER ASCE 7-10

   SITE CLASS: "D"

   SEISMIC DESIGN CATEGORY: "B"

   RESPONSE MODIFICATION FACTOR "R": 1

   OVERSTRENGTH FACTOR (W0): 1

   DEFLECTION AMPLIFICATION FACTOR "Cd": 1

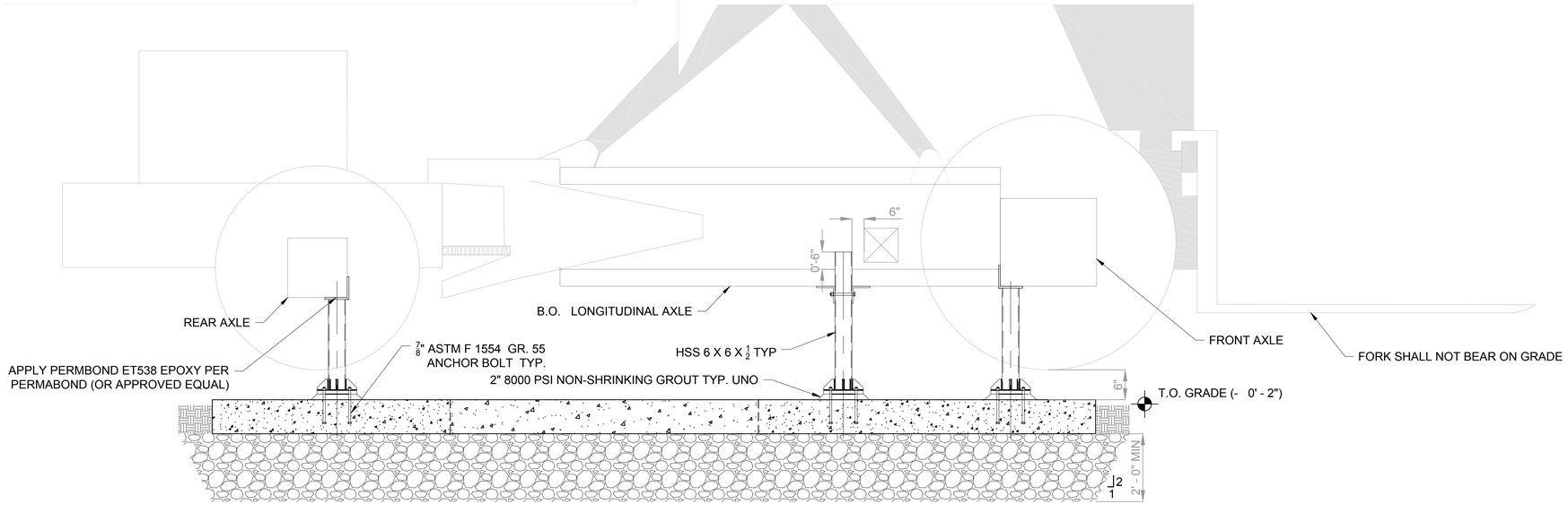
   SEISMIC INTERSTORY DRIFT LIMIT: 0.02h

   OVERALL TORSIONAL ECCENTRICITY: 5% SEISMIC FORCE IN LONG DIRECTION

   50% SEISMIC FORCE IN SHORT DIRECTION

   LATERAL LOAD RESISTING SYSTEM: ORDINARY STEEL FRAME

   SEISMIC BASE SHEAR COEFFICIENT: 21.2%
6. FRONT AND REAR AXLES SHALL BE EPOXY WELDED TO THE SUPPORTS.
7. VERTICAL LEG OF ANGLE SEATS SHALL BE IN FULL CONTACT WITH THE AXLES. NO MORE THAN 1/8" GAP IS ALLOWED. CONTRACTOR SHALL PROVIDE SHIMMING TO FILL ALL GAPS LESS THAN 1/8".
8. ALL ADDED STEEL SUPPORT AND ANCHOR RODS SHALL BE HOT DIPPED GALVANIZED (HDG).
9. FOUNDATION DESIGNED ASSUMING 1500 PSF NET BEARING CAPACITY DUE TO "DL+SDL + LL" AND 2500 PSF DUE TO "DL+SDL + E".
10. BACKFILL SHALL BE PLACED IN MAX. 6" LAYERS AND COMPACTED WITH A VIBRATING COMPACTOR TO MIN. 95% OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT.
11. THE CONTRACTOR WILL NOT EXCAVATE BELOW THE DEMARCATION LAYER OF THE CAP.



1 S-200 **FORKLIFT SUPPORT & FOUNDATION ELEVATION**

Scale: 1/2" = 1'-0"

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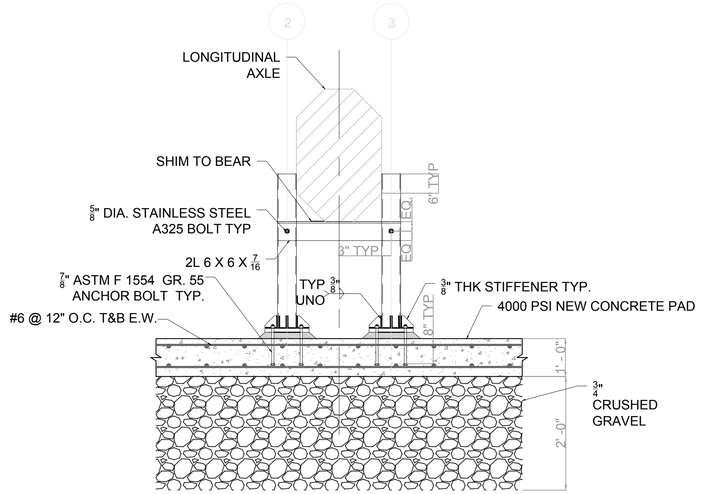
ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

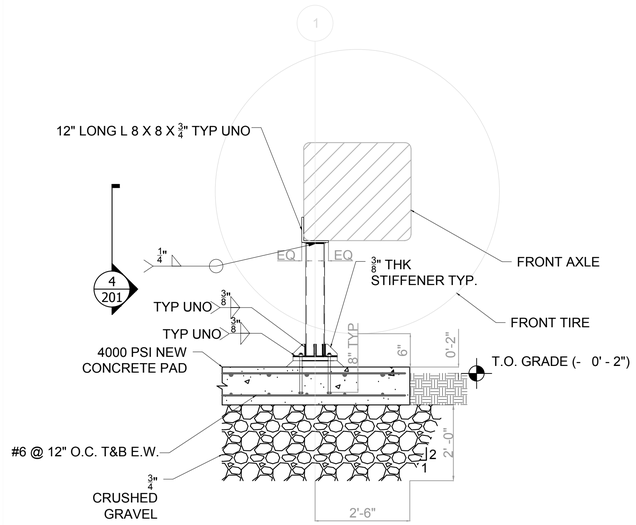
FORKLIFT SUPPORT PLAN AND ELEVATION

SHEET ID
S-200

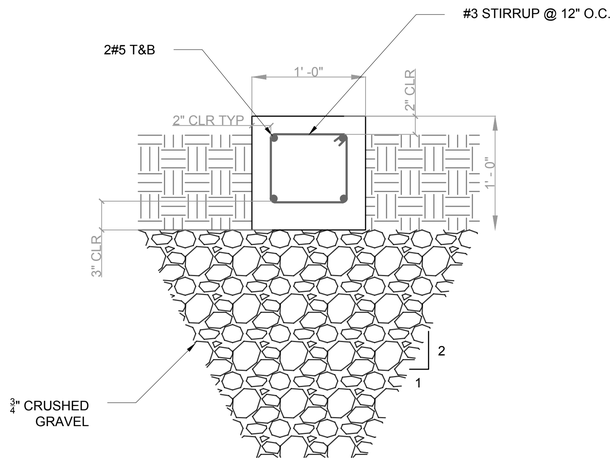
DESIGN 100%



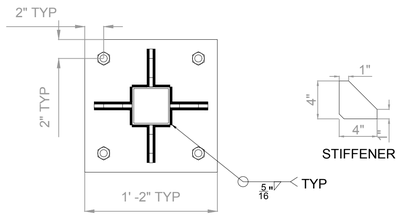
1 S-201 — **FORKLIFT SUPPORT SECTION**
Scale: 1/2" = 1'-0"



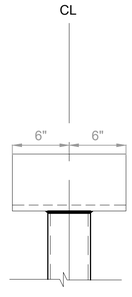
2 S-201 — **FORKLIFT SUPPORT SECTION**
Scale: 1/2" = 1'-0"



3 S-201 — **TIE BEAM SECTION**
Scale: 1 1/2" = 1'-0"



3 S-201 — **BASE PLATE DETAIL**
Scale: 1 1/2" = 1'-0"



3 S-201 — **SUPPORT CONNECTION DETAIL**
Scale: 1 1/2" = 1'-0"

NOT FOR CONSTRUCTION

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: SA
DRAWN BY: SA
CHECKED BY: CS
SUBMITTED BY: SA
SIZE: ANSI D
ISSUE DATE: AUGUST 2018
SOLICITATION NO.: XXXXXX-XX-X-XXXX
CONTRACT NO.: W912DQ-D-15-3011

U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

AECOM
100 RED SCHOOLHOUSE RD
CHESTNUT RIDGE, NY

ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

FORKLIFT SUPPORT SECTIONS AND DETAILS

SHEET ID
S-201

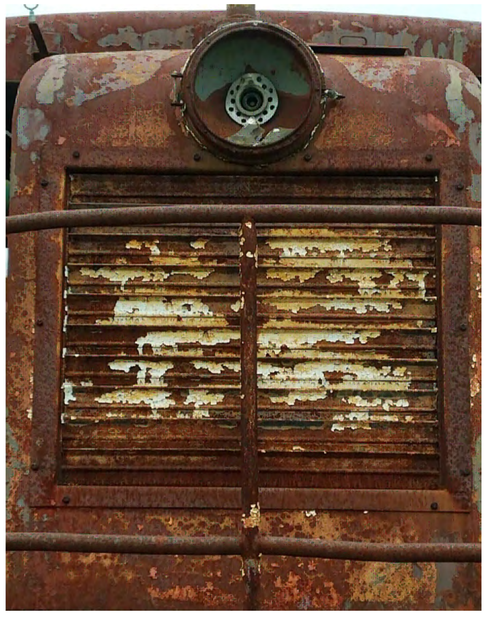
DESIGN 100%

LOCOMOTIVE DETAILS:

1. ESTIMATED DIMENSIONS: 28.5 FT LENGTH X 9.5 FT WIDTH X 12 FT HEIGHT, APPROXIMATELY 90,000 LBS. ACTUAL CONFIGURATION AND SCALE MUST BE FIELD VERIFIED.

LOCOMOTIVE TREATMENT:

1. TREATMENT MUST BE CONSISTENT WITH THE *SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES* (2017).
2. BEFORE ANY OF THIS WORK IS PERFORMED, CAREFUL DOCUMENTATION MUST BE COMPLETED OF THE SURVIVING PAINT SCHEME ALONG THE RUNNING BOARDS AND ON THE ENGINE COMPARTMENTS SO THAT IT CAN BE RECREATED AFTER CONSERVATION TREATMENTS. THE CONTRACTOR MUST SUBMIT DOCUMENTATION, INCLUDING PHOTO DOCUMENTATION, A DIAGRAM WITH MEASUREMENTS AND A LIST OF THE EXISTING PAINTING AND PROPOSED PAINTING SCHEMES AND COLORS.
3. THE CONTRACTOR MUST ASSUME THE EXISTING PAINT IS LEAD BASED AND REMOVAL OF THE PAINT MUST COMPLY WITH ALL FEDERAL AND STATE REGULATIONS.
4. CONFINED SPACE ENTRY PLANS, IF NECESSARY, MUST BE PREPARED AND SUBMITTED TO THE USACE PRIOR TO BEGINNING WORK.
5. THE WORK AREA MUST BE CLEARLY DEFINED WITH BARRIERS AND ENCLOSURES TO PROTECT THE PUBLIC FROM ANY OF THE COMPONENTS OF THE RESTORATION PROCESS. LINERS AND FILTRATIONS SYSTEMS MUST BE USED TO COLLECT ANY MEDIUM THAT BECOMES AIRBORNE DURING THE RESTORATION PROCESS (E.G., AIR ABRASION MEDIA, RUST, ACIDS AND PAINT) FOR REMOVAL FROM THE SITE.
6. AN INERT BARRIER MUST BE PLACED BETWEEN DIFFERENT METAL TYPES. FOR STEEL TO ALUMINUM, THE ALUMINUM MUST BE REMOVED AND A NYLON BUFFER MUST BE PLACED BETWEEN THE METALS BEFORE REPLACING THE ALUMINUM.
7. THE ENTIRE SURFACE INCLUDING THE UNDERCARRIAGE MUST BE CLEANED WITH AN AIR ABRASION SYSTEM EXCLUDING THE INTERNAL CONTROL PANELS.
8. ALL OF THE SURFACE RUST AND SURVIVING PAINT MUST BE REMOVED BY MECHANICAL CLEANING USING AIR ABRASION WITH SODIUM BICARBONATE. THE CONTRACTOR MUST FOLLOW THE TECHNIQUES SET FORTH IN THE GENERAL REQUIREMENTS TO DETERMINE THE CORRECT PSI.
9. THE SURFACES MUST BE PRIMED WITH PHOSPHORIC ACID AND TANNIC ACID. THE CONTRACTOR MUST FOLLOW THE TECHNIQUES SET FORTH IN THE GENERAL REQUIREMENTS TO DETERMINE THE CORRECT CONCENTRATIONS OF EACH ACID.
10. AT LEAST ONE COAT OF PHOSPHORIC ACID AND THREE COATS OF TANNIC ACID MUST BE APPLIED. THE CONTRACTOR MUST WAIT UNTIL THE TREATED AREAS ARE FULLY DRY AND MUST THOROUGHLY INSPECT THE AREAS BETWEEN APPLICATIONS. ADDITIONAL APPLICATIONS OF TANNIC ACID MAY BE NEEDED IF THE ARTIFACT IS NOT FULLY BLACK.
11. COMPLETE COATINGS OF PAINT MUST BE APPLIED TO THE ENTIRE ARTIFACT TO PREVENT MOISTURE AND CHLORIDES FROM PENETRATING THROUGH THE LAYERS. THE PAINT FOR THE LOCOMOTIVE MUST BE HISTORIC COLORS APPROVED BY USACE. AT LEAST TWO COMPLETE COATINGS OF A (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION [OSHA] APPROVED) LOW LUSTER DIRECT TO METAL (D.T.M.) ALKYD PAINT SHALL BE APPLIED. THE PAINT SHALL BE AN INDUSTRIAL GRADE PAINT RATED FOR EXTERIOR USE ON METALS SUCH AS BENJAMIN MOORE®, SUPER SPEC HP® D.T.M. ALKYD LOW LUSTRE P23 OR EQUIVALENT. THE CONTRACTOR MUST WAIT AT LEAST ONE DAY AND UNTIL THE PAINT IS FULLY DRY AND INSPECT THE ARTIFACT BEFORE APPLYING ADDITIONAL COATS. MORE THAN THREE COATS MAY BE NECESSARY IF ALL AREAS OF THE ARTIFACT ARE NOT FULLY COVERED.
13. THE INTERIOR OF THE CAB MUST BE WIPED CLEAN. THE GLASS ON THE CAB MUST BE REPLACED BY REMOVING THE OLD GASKETS AND REPLACING THE GLASS WITH TINTED GLASS AND CUSTOM GASKETS SO THE INTERIOR IS NOT VISIBLE TO MUSEUM PATRONS.THE GLASS MUST BE SEALED IN PLACE TO ENSURE THAT WATER CANNOT REACH THE INTERIOR. ALL THE DOORS AND COMPARTMENTS MUST BE SEALED WITH CUSTOM GASKETS AND LOCKED.



LOCOMOTIVE PHOTOS

NOT FOR CONSTRUCTION

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: JP	ISSUE DATE: AUGUST 2018
DRAWN BY: CF	SOLICITATION NO.: XXXXXX-XX-X-XXXX
CHECKED BY: MK	CONTRACT NO.: W912DQ-D-15-3011
SUBMITTED BY: CH	
SIZE: ANSI D	

U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

AECOM
100 RED SCHOOLHOUSE RD
CHESTNUT RIDGE, NY

ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

LOCOMOTIVE RESTORATION DETAILS

SHEET ID

X-101

100% DESIGN

INGOT CAR AND MOLD CAR PHOTOS

TWO INGOT CARS AND TWO MOLD CARS DETAILS:

1. ESTIMATED DIMENSIONS OF THE BODY OF THE CARS: 30 FT LENGTH X 10 FT WIDTH. ACTUAL CONFIGURATION AND SCALE MUST BE FIELD VERIFIED.

INGOT CAR AND MOLD CAR TREATMENT:

1. TREATMENT MUST BE CONSISTENT WITH THE *SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES* (2017).
2. CONFINED SPACE ENTRY PLANS, IF NECESSARY, MUST BE PREPARED AND SUBMITTED TO THE USACE PRIOR TO BEGINNING WORK.
3. THE CONTRACTOR MUST ASSUME THE EXISTING PAINT IS LEAD BASED AND REMOVAL OF THE PAINT MUST COMPLY WITH ALL FEDERAL AND STATE REGULATIONS.
4. THE WORK AREA MUST BE CLEARLY DEFINED WITH BARRIERS AND ENCLOSURES TO PROTECT THE PUBLIC FROM ANY OF THE COMPONENTS OF THE RESTORATION PROCESS. LINERS AND FILTRATION SYSTEMS MUST BE USED TO COLLECT ANY MEDIUM THAT BECOMES AIRBORNE DURING THE RESTORATION PROCESS (E.G., AIR ABRASION MEDIA, RUST, ACIDS AND PAINT) FOR REMOVAL FROM THE SITE.
5. AN INERT BARRIER MUST BE PLACED BETWEEN DIFFERENT METAL TYPES. FOR STEEL TO ALUMINUM, THE ALUMINUM MUST BE REMOVED AND A NYLON BUFFER MUST BE PLACED BETWEEN THE METALS BEFORE REPLACING THE ALUMINUM.
6. THE MOLD BOXES MUST BE REMOVED AND TREATED SEPARATELY BEFORE BEING REPLACED. ALL OF THE SURFACE RUST AND SURVIVING PAINT MUST BE REMOVED INCLUDING THE UNDERCARRIAGES, UPPER PLATFORMS AND UNDER THE MOLD BOXES BY MECHANICAL CLEANING USING AIR ABRASION WITH SODIUM BICARBONATE. THE CONTRACTOR MUST FOLLOW THE TECHNIQUES SET FORTH IN THE GENERAL REQUIREMENTS TO DETERMINE THE CORRECT PSI.
7. THE SURFACES MUST BE PRIMED WITH PHOSPHORIC ACID AND TANNIC ACID. THE CONTRACTOR MUST FOLLOW THE TECHNIQUES SET FORTH IN THE GENERAL REQUIREMENTS TO DETERMINE THE CORRECT CONCENTRATION OF EACH ACID.
8. AT LEAST ONE COAT OF PHOSPHORIC ACID AND THREE COATS OF TANNIC ACID MUST BE APPLIED. THE CONTRACTOR MUST WAIT UNTIL THE TREATED AREAS ARE FULLY DRY AND MUST THOROUGHLY INSPECT THE AREAS BETWEEN APPLICATIONS. ADDITIONAL APPLICATIONS OF TANNIC ACID MAY BE NEEDED IF THE ARTIFACT IS NOT FULLY BLACK.
9. COMPLETE COATINGS OF PAINT MUST BE APPLIED TO THE ENTIRE ARTIFACT TO PREVENT MOISTURE AND CHLORIDES FROM PENETRATING THROUGH THE LAYERS. THE PAINT MUST BE LATEX BASED. AT LEAST TWO COATINGS OF BLACK OR FLAT COLORED (OSHA APPROVED) DIRECT TO METAL (DTM) SAFETY PAINT MUST BE APPLIED TO THE ARTIFACT. THE PAINT MUST BE AN INDUSTRIAL GRADE PAINT RATED FOR EXTERIOR USE ON METALS SUCH AS BENJAMIN MOORE, ULTRA SPEC (LATEX) DTM HP25 NEUTRAL MATTE-BLACK PAINT OR EQUIVALENT. THE CONTRACTOR MUST WAIT AT LEAST ONE DAY AND UNTIL THE PAINT IS FULLY DRY AND INSPECT THE ARTIFACT BEFORE APPLYING ADDITIONAL COATS. MORE THAN TWO COATS MAY BE NECESSARY IF ALL AREAS OF THE ARTIFACTS ARE NOT FULLY COVERED.

NOT FOR CONSTRUCTION

US Army Corps of Engineers®

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U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

AECOM
100 RED SCHOOLHOUSE RD
CHESTNUT RIDGE, NY

ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

INGOT CAR AND MOLD CAR RESTORATION DETAILS

SHEET ID
X-102

100% DESIGN

CRANE AND FLAT RAIL CAR PHOTOS

CRANE AND FLAT RAIL CAR TREATMENT:

1. TREATMENT MUST BE CONSISTENT WITH THE *SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES* (2017).
2. BEFORE ANY OF THIS WORK IS PERFORMED, CAREFUL DOCUMENTATION MUST BE COMPLETED OF THE SURVIVING PAINT SCHEME, IF PRESENT, ON THE CRANE SO THAT IT CAN BE RECREATED AFTER CONSERVATION TREATMENTS. THE CONTRACTOR MUST SUBMIT DOCUMENTATION, INCLUDING PHOTO DOCUMENTATION, A DIAGRAM WITH MEASUREMENTS AND A LIST OF THE EXISTING PAINTING AND PROPOSED PAINTING SCHEMES AND COLORS.
3. CONFINED SPACE ENTRY PLANS, IF NECESSARY, MUST BE PREPARED AND SUBMITTED TO THE USACE PRIOR TO BEGINNING WORK.
4. THE CONTRACTOR MUST ASSUME THE EXISTING PAINT IS LEAD BASED AND REMOVAL OF THE PAINT MUST COMPLY WITH ALL FEDERAL AND STATE REGULATIONS.
5. THE WORK AREA MUST BE CLEARLY DEFINED WITH BARRIERS AND ENCLOSURES TO PROTECT THE PUBLIC FROM ANY OF THE COMPONENTS OF THE RESTORATION PROCESS. LINERS AND FILTRATION SYSTEMS MUST BE USED TO COLLECT ANY MEDIUM THAT BECOMES AIRBORNE DURING THE RESTORATION PROCESS (E.G., AIR ABRASION MEDIA, RUST, ACIDS AND PAINT) FOR REMOVAL FROM THE SITE.
6. AN INERT BARRIER MUST BE PLACED BETWEEN DIFFERENT METAL TYPES. FOR STEEL TO ALUMINUM, THE ALUMINUM MUST BE REMOVED AND A NYLON BUFFER MUST BE PLACED BETWEEN THE METALS BEFORE REPLACING THE ALUMINUM.
7. THE ENTIRE SURFACE INCLUDING THE UNDERCARRIAGE MUST BE CLEANED WITH AN AIR ABRASION SYSTEM EXCLUDING THE INTERNAL CONTROL PANELS.
8. ALL OF THE SURFACE RUST AND SURVIVING PAINT MUST BE REMOVED BY MECHANICAL CLEANING USING AIR ABRASION WITH SODIUM BICARBONATE. THE CONTRACTOR MUST FOLLOW THE TECHNIQUES SET FORTH IN THE GENERAL REQUIREMENTS TO DETERMINE THE CORRECT PSI.
9. THE SURFACES MUST BE PRIMED WITH PHOSPHORIC ACID AND TANNIC ACID. THE CONTRACTOR MUST FOLLOW THE TECHNIQUES SET FORTH IN THE GENERAL REQUIREMENTS TO DETERMINE THE CORRECT CONCENTRATIONS OF EACH ACID.
10. AT LEAST ONE COAT OF PHOSPHORIC ACID AND THREE COATS OF TANNIC ACID MUST BE APPLIED. THE CONTRACTOR MUST WAIT UNTIL THE TREATED AREAS ARE FULLY DRY AND MUST THOROUGHLY INSPECT THE AREAS BETWEEN APPLICATIONS. ADDITIONAL APPLICATIONS OF TANNIC ACID MAY BE NEEDED IF THE ARTIFACT IS NOT FULLY BLACK.
11. COMPLETE COATINGS OF PAINT MUST BE APPLIED TO THE ENTIRE ARTIFACTS TO PREVENT MOISTURE AND CHLORIDES FROM PENETRATING THROUGH THE LAYERS. THE PAINT FOR THE CRANE MUST BE HISTORIC COLORS APPROVED BY USACE. AT LEAST TWO COMPLETE COATINGS OF A (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION [OSHA] APPROVED) LOW LUSTER DIRECT TO METAL (D.T.M.) ALKYD PAINT SHALL BE APPLIED. THE PAINT SHALL BE AN INDUSTRIAL GRADE PAINT RATED FOR EXTERIOR USE ON METALS SUCH AS BENJAMIN MOORE®, SUPER SPEC HP® D.T.M. ALKYD LOW LUSTRE P23 OR EQUIVALENT. THE PAINT FOR FLAT RAIL CAR MUST BE LATEX-BASED. AT LEAST TWO COMPLETE COATINGS OF A (OSHA APPROVED) DIRECT TO METAL (D.T.M.) SAFETY BLACK MATTE PAINT MUST BE APPLIED TO THE ARTIFACT. THE PAINT MUST BE AN INDUSTRIAL GRADE PAINT RATED FOR EXTERIOR USE ON METALS SUCH AS BENJAMIN MOORE®, ULTRA SPEC (LATEX) D.T.M. HP25 OR EQUIVALENT. THE CONTRACTOR MUST WAIT AT LEAST ONE DAY AND UNTIL THE PAINT IS FULLY DRY AND INSPECT THE ARTIFACT BEFORE APPLYING ADDITIONAL COATS. MORE THAN THREE COATS MAY BE NECESSARY IF ALL AREAS OF THE ARTIFACT ARE NOT FULLY COVERED.
12. ALL THE DOORS AND COMPARTMENTS MUST BE SEALED WITH CUSTOM GASKETS AND LOCKED TO PREVENT WATER FROM PENETRATING INTERNAL COMPONENTS AND TO PREVENT ENTRY BY PATRONS.
13. THE WOOD BOARDS MUST BE REPLACED WITH PRE-TREATED WOOD.

NOT FOR CONSTRUCTION

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

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SOLICITATION NO.: XXXXXX-XX-X-XXXX
CONTRACT NO.: W912DQ-D-15-3011

DESIGNED BY: JP
DRAWN BY: CF
CHECKED BY: MK
SUBMITTED BY:
SIZE: ANSI D

U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

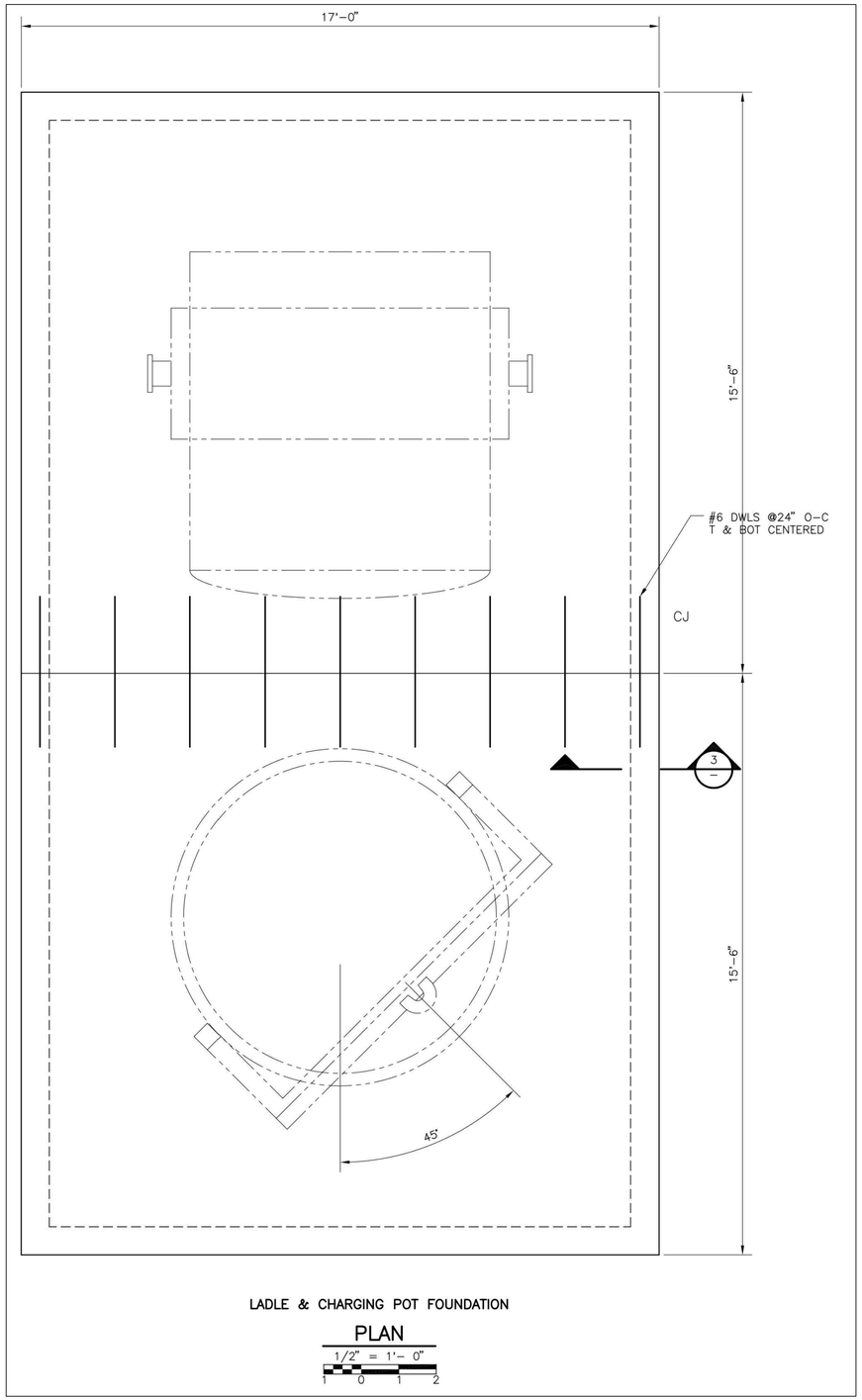
AECOM
100 RED SCHOOLHOUSE RD
CHESTNUT RIDGE, NY

ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

CRANE AND FLAT RAIL CAR
RESTORATION DETAILS

SHEET ID
X-103

100% DESIGN



LADLE & CHARGING POT FOUNDATION

PLAN

1/2" = 1'– 0"

CHARGING POT AND LADLE DETAILS
REFERENCE: CDM 2005 DESIGN DRAWING

CHARGING POT AND LADLE PHOTOS

CHARGING POT AND LADLE TREATMENT:

1. TREATMENT MUST BE CONSISTENT WITH THE *SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES* (2017).
2. THE SLAG AND BRICKS WITHIN THE CHARGING POT AND LADLE MUST BE REMOVED. THE METHOD OF SLAG REMOVAL MUST BE APPROVED BY THE USACE PRIOR TO STARTING THE WORK.THE APPROVAL PROCESS MUST INCLUDE USACE APPROVAL OF A TRIAL METHOD THAT MUST BE DEMONSTRATED AND THOROUGHLY DOCUMENTED ON A SMALL SECTION OF THE SLAG BEFORE FINAL USACE APPROVAL FOR OVERALL USE.
3. CONFINED SPACE ENTRY PLANS, IF NECESSARY, MUST BE PREPARED AND SUBMITTED TO THE USACE PRIOR TO BEGINNING WORK.
4. LIFTING PLANS MUST BE PREPARED AND SUBMITTED TO THE USACE PRIOR TO BEGINNING WORK.
5. THE WORK AREA MUST BE CLEARLY DEFINED WITH BARRIERS AND ENCLOSURES TO PROTECT THE PUBLIC FROM ANY OF THE COMPONENTS OF THE RESTORATION PROCESS. LINERS AND FILTRATION SYSTEMS MUST BE USED TO COLLECT ANY MEDIUM THAT BECOMES AIRBORNE DURING THE RESTORATION PROCESS (E.G., AIR ABRASION MEDIA, RUST, ACIDS AND PAINT) FOR REMOVAL FROM THE SITE.
6. THE ARTIFACTS MUST BE LIFTED USING AN APPROPRIATELY SIZED CRANE.
7. A TEFLON PAD MUST BE PLACED BETWEEN THE CHARGING POT AND THE TREATED CONCRETE AND LADLE AND TREATED CONCRETE. EACH ARTIFACT MUST BE REPOSITIONED SUCH THAT IT IS SECURE AND STABLE. EACH ARTIFACT MUST BE HELD IN THE CENTER WITH A SLING OR APPROPRIATE SUPPORT SYSTEM TO KEEP IT FROM MOVING OFF THE CENTER. THE ORIENTATION MUST BE MAINTAINED AND THE ARTIFACT MUST BE PLACED BACK IN THE SAME ORIENTATION.
8. THE CONDITION OF THE CURRENT SUPPORT WEDGES FOR THE LADLE WILL BE ACCESSED AND REPLACED IN KIND IF NECESSARY. THE WEDGES WILL BE TREATED IN THE SAME MANNER AS THE LADLE WITH THE EXCEPTION THAT THE FINAL PAINT WILL BE GREY INSTEAD OF BLACK.
9. ALL OF THE SURFACE RUST AND SURVIVING PAINT MUST BE REMOVED BY MECHANICAL CLEANING USING AIR ABRASION WITH WALNUT SHELL MEDIA. THE CONTRACTOR MUST FOLLOW THE TECHNIQUES SET FORTH IN THE GENERAL REQUIREMENTS TO DETERMINE THE CORRECT PSI.
10. THE SURFACES MUST BE PRIMED WITH PHOSPHORIC ACID AND TANNIC ACID. THE CONTRACTOR MUST FOLLOW THE TECHNIQUES SET FORTH IN THE GENERAL REQUIREMENTS TO DETERMINE THE CORRECT CONCENTRATIONS OF EACH ACID.
11. AT LEAST ONE COAT OF PHOSPHORIC ACID AND THREE COATS OF TANNIC ACID MUST BE APPLIED. THE CONTRACTOR MUST WAIT UNTIL THE TREATED AREAS ARE FULLY DRY AND MUST THOROUGHLY INSPECT THE AREAS BETWEEN APPLICATIONS. ADDITIONAL APPLICATIONS OF TANNIC ACID MAY BE NEEDED IF THE ARTIFACT IS NOT FULLY BLACK.
12. COMPLETE COATINGS OF PAINT MUST BE APPLIED TO THE ENTIRE ARTIFACT TO PREVENT MOISTURE AND CHLORIDES FROM PENETRATING THROUGH THE LAYERS. THE PAINT MUST BE LATEX BASED. AT LEAST TWO COATINGS OF NEUTRAL BLACK MATTE (OSHA APPROVED) DIRECT TO METAL (DTM) SAFETY PAINT MUST BE APPLIED TO THE ARTIFACT. THE PAINT MUST BE AN INDUSTRIAL GRADE PAINT RATED FOR EXTERIOR USE ON METALS SUCH AS BENJAMIN MOORE®, ULTRA SPEC (LATEX) DTM HP25 OR EQUIVALENT. THE CONTRACTOR MUST WAIT AT LEAST ONE DAY AND UNTIL THE PAINT IS FULLY DRY AND INSPECT THE ARTIFACT BEFORE APPLYING ADDITIONAL COATS. MORE THAN TWO COATS MAY BE NECESSARY IF ALL AREAS OF THE ARTIFACTS ARE NOT FULLY COVERED.

CONCRETE PAD TREATMENT:

1. ANY CRACKS IN THE CONCRETE MUST BE REPAIRED USING SIKADUR® 35, HI-MOD LV OR EQUIVALENT.
2. THE CONCRETE PADS MUST BE PRESSURE WASHED AND ALLOWED TO FULLY DRY BEFORE BEING PAINTED.
3. COMPLETE COATINGS OF PAINT MUST BE APPLIED TO THE CONCRETE TO PREVENT MOISTURE AND CHLORIDES FROM PENETRATING THROUGH THE LAYERS. THE PAINT MUST BE LATEX BASED. AT LEAST TWO THICK COATINGS OF GREY (OSHA APPROVED) DIRECT TO METAL (DTM) SAFETY PAINT MUST BE APPLIED. THE PAINT MUST BE AN INDUSTRIAL GRADE PAINT RATED FOR EXTERIOR USE ON METALS SUCH AS BENJAMIN MOORE®, ULTRA SPEC (LATEX) DTM HP25 OR EQUIVALENT. THE CONTRACTOR MUST WAIT AT LEAST ONE DAY AND UNTIL THE PAINT IS FULLY DRY AND INSPECTED BEFORE APPLYING ADDITIONAL COATS. MORE THAN TWO COATS MAY BE NECESSARY IF ALL AREAS ARE NOT FULLY COVERED.

NOT FOR CONSTRUCTION

US Army Corps of Engineers®

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U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

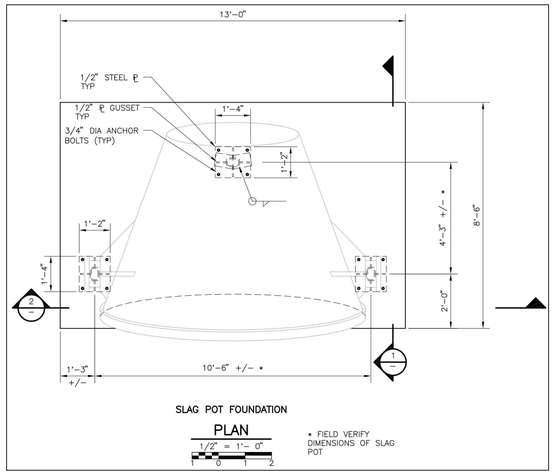
AECOM
100 RED SCHOOLHOUSE RD
CHESTNUT RIDGE, NY

ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

CHARGING POT AND LADLE
RESTORATION DETAILS

SHEET ID
X-104

100% DESIGN

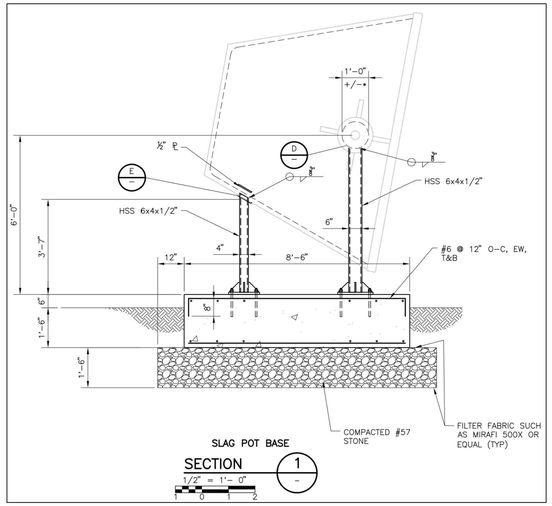


SLAG POT FOUNDATION

PLAN

1/2" = 1'- 0"

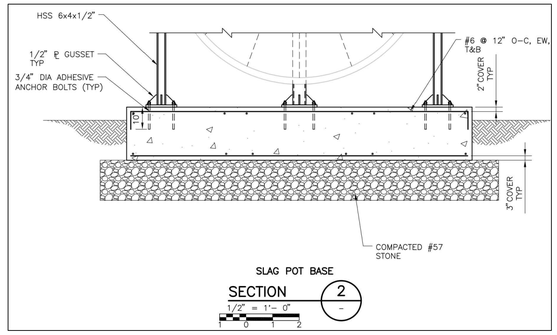
* FIELD VERIFY DIMENSIONS OF SLAG POT



SLAG POT BASE

SECTION 1

1/2" = 1'- 0"



SLAG POT BASE

SECTION 2

1/2" = 1'- 0"

SLAG POT DETAILS

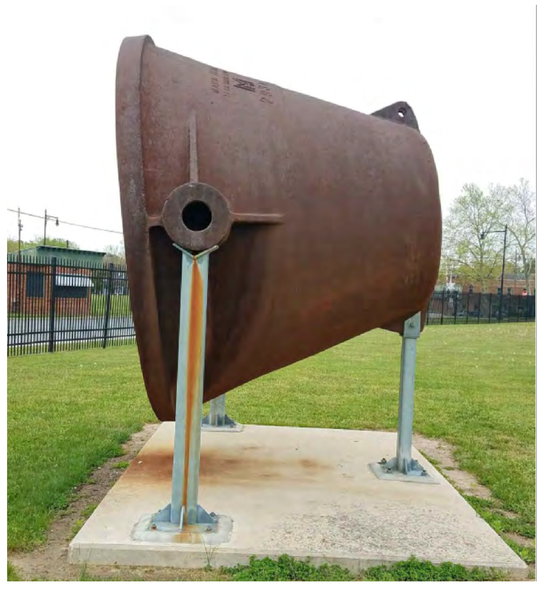
REFERENCE: CDM 2005 DESIGN DRAWING

SLAG POT TREATMENT:

1. TREATMENT MUST BE CONSISTENT WITH THE *SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES* (2017).
2. THE SLAG WITHIN THE SLAG POT MUST BE MECHANICALLY REMOVED. THE METHOD OF SLAG REMOVAL MUST BE APPROVED BY THE USACE PRIOR TO STARTING THE WORK.THE APPROVAL PROCESS MUST INCLUDE USACE APPROVAL OF A TRIAL METHOD THAT MUST BE DEMONSTRATED AND THOROUGHLY DOCUMENTED ON A SMALL SECTION OF THE SLAG BEFORE FINAL USACE APPROVAL FOR OVERALL USE. THE METHOD OF SLAG REMOVAL MUST TAKE INTO ACCOUNT THE CRACK AT THE BOTTOM OF THE SLAG POT. THE METHOD MUST INCLUDE A PROPOSAL TO ADDRESS SEALING THE CRACK LONG TERM (E.G., THROUGH WELDING OR BRAZING).
3. CONFINED SPACE ENTRY PLANS, IF NECESSARY, MUST BE PREPARED AND SUBMITTED TO THE USACE PRIOR TO BEGINNING WORK.
4. LIFTING PLANS MUST BE PREPARED AND SUBMITTED TO THE USACE PRIOR TO BEGINNING WORK.
5. THE WORK AREA MUST BE CLEARLY DEFINED WITH BARRIERS AND ENCLOSURES TO PROTECT THE PUBLIC FROM ANY OF THE COMPONENTS OF THE RESTORATION PROCESS. LINERS AND FILTRATION SYSTEMS MUST BE USED TO COLLECT ANY MEDIUM THAT BECOMES AIRBORNE DURING THE RESTORATION PROCESS (E.G., AIR ABRASION MEDIA, RUST, ACIDS AND PAINT) FOR REMOVAL FROM THE SITE.
6. THE BASEPLATES MUST BE REPLACED. THE ARTIFACT MUST BE LIFTED USING AN APPROPRIATELY SIZED CRANE. THE BASEPLATES, INCLUDING THE GROUT AND SHIMMING UNDER AND AROUND THE BASEPLATE, MUST BE REMOVED UNDER THE SUPERVISION OF A STRUCTURAL ENGINEER. THE CURRENT ANCHOR BOLTS MUST BE USED FOR THE REPLACEMENT SUPPORTS AND BASEPLATES. THE SUPPORTS MUST BE REUSED OR REPLACED IN KIND. THE BASEPLATES MUST BE REPLACED WITH AT LEAST AN 1 INCH THICK HOT DIP GALVANIZED ASTM A36 BASEPLATE AND PROVIDE A MINIMUM OF A TWO INCH EDGE DISTANCE FROM THE CENTER OF THE HOLE. TEFLON PADS MUST BE PLACED BETWEEN THE ARTIFACT AND THE SUPPORTS.
7. THE ARTIFACT MUST BE REPOSITIONED ON THE MODERN SUPPORTS SUCH THAT IT IS SECURE AND STABLE. THE ARTIFACT MUST BE HELD IN THE CENTER WITH A SLING OR APPROPRIATE SUPPORT SYSTEM TO KEEP IT FROM MOVING OFF THE CENTER. THE ORIENTATION MUST BE MAINTAINED AND THE ARTIFACT MUST BE PLACED BACK IN THE SAME ORIENTATION. NO ADJUSTMENTS MUST BE MADE TO THE POSITIONING OF THE SUPPORTS.
8. THE ENTIRE SURFACE MUST BE CLEANED WITH AN AIR ABRASION SYSTEM.
9. ALL OF THE SURFACE RUST AND SURVIVING PAINT MUST BE REMOVED BY MECHANICAL CLEANING USING AIR ABRASION WITH WALNUT SHELL MEDIA. THE CONTRACTOR MUST FOLLOW THE TECHNIQUES SET FORTH IN THE GENERAL REQUIREMENTS TO DETERMINE THE CORRECT PSI.
10. THE SURFACES MUST BE PRIMED WITH PHOSPHORIC ACID AND TANNIC ACID. THE CONTRACTOR MUST FOLLOW THE TECHNIQUES SET FORTH IN THE GENERAL REQUIREMENTS TO DETERMINE THE CORRECT CONCENTRATIONS OF EACH ACID.
11. AT LEAST ONE COAT OF PHOSPHORIC ACID AND THREE COATS OF TANNIC ACID MUST BE APPLIED. THE CONTRACTOR MUST WAIT UNTIL THE TREATED AREAS ARE FULLY DRY AND MUST THOROUGHLY INSPECT THE AREAS BETWEEN APPLICATIONS. ADDITIONAL APPLICATIONS OF TANNIC ACID MAY BE NEEDED IF THE ARTIFACT IS NOT FULLY BLACK.
12. COMPLETE COATINGS OF PAINT MUST BE APPLIED TO THE ENTIRE ARTIFACT TO PREVENT MOISTURE AND CHLORIDES FROM PENETRATING THROUGH THE LAYERS. THE PAINT MUST BE LATEX BASED. AT LEAST TWO COATINGS OF NEUTRAL BLACK MATTE (OSHA APPROVED) DIRECT TO METAL (DTM) SAFETY PAINT MUST BE APPLIED TO THE ARTIFACT. THE PAINT MUST BE AN INDUSTRIAL GRADE PAINT RATED FOR EXTERIOR USE ON METALS SUCH AS BENJAMIN MOORE®, ULTRA SPEC (LATEX) DTM HP25 OR EQUIVALENT. THE CONTRACTOR MUST WAIT AT LEAST ONE DAY AND UNTIL THE PAINT IS FULLY DRY AND INSPECT THE ARTIFACT BEFORE APPLYING ADDITIONAL COATS. MORE THAN TWO COATS MAY BE NECESSARY IF ALL AREAS OF THE ARTIFACTS ARE NOT FULLY COVERED.

CONCRETE PAD TREATMENT:

1. ANY CRACKS IN THE CONCRETE MUST BE REPAIRED USING SIKADUR® 35, HI-MOD LV AND SIKACRYL® READY-MIX CONCRETE PATCH OR EQUIVALENTS.
2. THE CUT BOLTS IN THE CONCRETE PAD AT THE REAR OF THE SLAG POT MUST BE COATED WITH SIKAGARD® 62 EPOXY COATING OR EQUIVALENT.
3. THE CONCRETE PADS MUST BE PRESSURE WASHED AND ALLOWED TO FULLY DRY BEFORE BEING PAINTED.
4. COMPLETE COATINGS OF PAINT MUST BE APPLIED TO THE CONCRETE TO PREVENT MOISTURE AND CHLORIDES FROM PENETRATING THROUGH THE LAYERS. THE PAINT MUST BE LATEX BASED. AT LEAST TWO THICK COATINGS OF GREY (OSHA APPROVED) DIRECT TO METAL (DTM) SAFETY PAINT MUST BE APPLIED. THE PAINT MUST BE AN INDUSTRIAL GRADE PAINT RATED FOR EXTERIOR USE ON METALS SUCH AS BENJAMIN MOORE®, ULTRA SPEC (LATEX) DTM HP25 OR EQUIVALENT. THE CONTRACTOR MUST WAIT UNTIL THE PAINT IS FULLY DRY AND INSPECTED BEFORE APPLYING ADDITIONAL COATS. MORE THAN TWO COATS MAY BE NECESSARY IF ALL AREAS ARE NOT FULLY COVERED.



SLAG POT PHOTOS

NOT FOR CONSTRUCTION

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: JP	ISSUE DATE: AUGUST 2018
DRAWN BY: CF	SOLICITATION NO.: XXXXXX-XX-X-XXXX
CHECKED BY: MK	CONTRACT NO.: W912DQ-15-3011
SUBMITTED BY: CH	
SIZE: ANSI D	

U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

AECOM
100 RED SCHOOLHOUSE RD
CHESTNUT RIDGE, NY

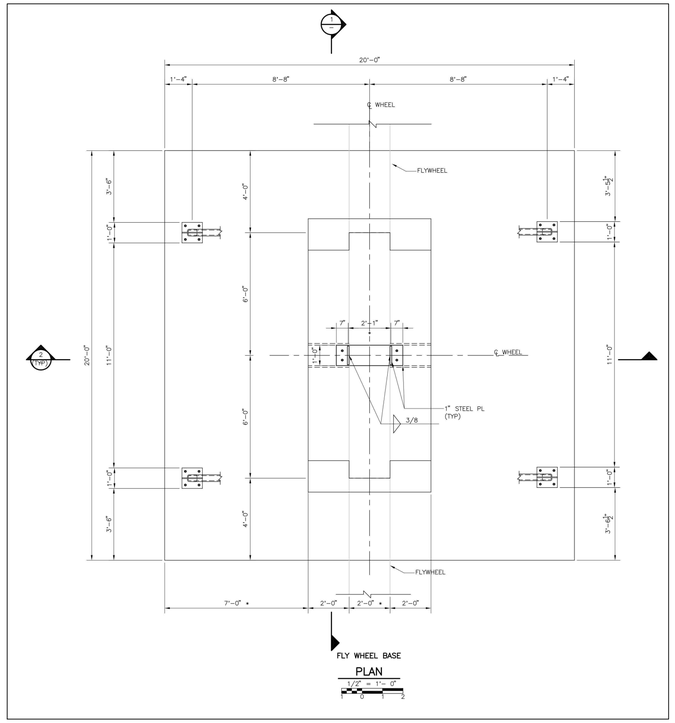
ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

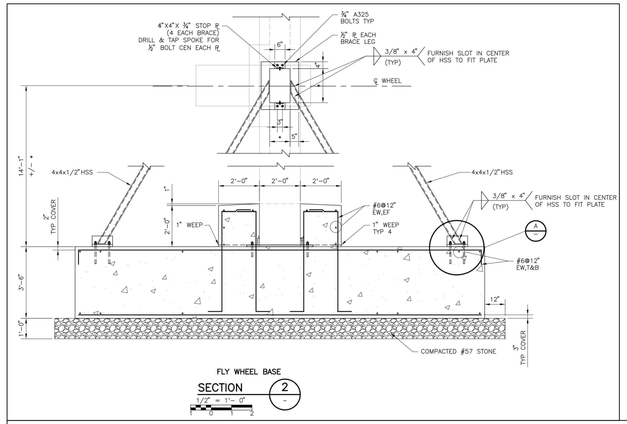
SLAG POT RESTORATION DETAILS

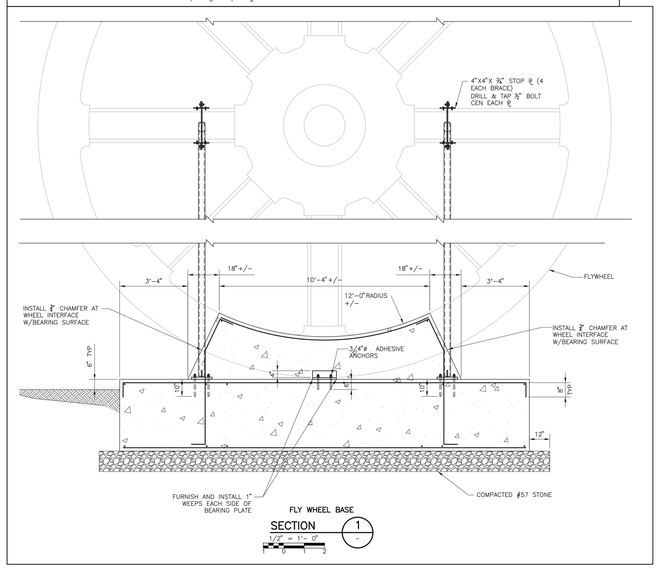
SHEET ID

X-105

100% DESIGN







FLYWHEEL PHOTOS

FLYWHEEL DETAILS
REFERENCE: CDM 2005 DESIGN DRAWING

FLYWHEEL TREATMENT:
1. TREATMENT MUST BE CONSISTENT WITH THE *SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES* (2017).
2. BEFORE ANY OF THIS WORK IS PERFORMED, CAREFUL DOCUMENTATION MUST BE COMPLETED OF THE SURVIVING STENCILS ON THE FLYWHEEL. THE CONTRACTOR MUST SUBMIT DOCUMENTATION, INCLUDING PHOTO DOCUMENTATION, A DIAGRAM WITH MEASUREMENTS AND A LIST OF THE EXISTING STENCILS AND PROPOSED PAINTING SCHEMES AND COLORS. ANY ORIGINAL SURFACE DETAILS (E.G. STENCILS) THAT ARE REMOVED DURING THE ABRASION TREATMENTS MUST BE REPLACED ON THE PAINTED SURFACE.
3. TEMPORARY SUPPORT PLANS MUST BE PREPARED AND SUBMITTED TO THE USACE PRIOR TO BEGINNING WORK.
4. THE WORK AREA MUST BE CLEARLY DEFINED WITH BARRIERS AND ENCLOSURES TO PROTECT THE PUBLIC FROM ANY OF THE COMPONENTS OF THE RESTORATION PROCESS. LINERS AND FILTRATION SYSTEMS MUST BE USED TO COLLECT ANY MEDIUM THAT BECOMES AIRBORNE DURING THE RESTORATION PROCESS (E.G., AIR ABRASION MEDIA, RUST, ACIDS AND PAINT) FOR REMOVAL FROM THE SITE.
5. TEMPORAY SUPPORTS MUST BE PUT INTO PLACE AND TEFLON PADS MUST BE PLACED BETWEEN THE ARTIFACT AND THE MODERN SUPPORTS. THE ORIENTATION MUST BE MAINTAINED AND THE ARTIFACT MUST MAINTAIN THE SAME ORIENTATION. NO ADJUSTMENTS MUST BE MADE TO THE POSITIONING OF THE SUPPORTS. TEFLON PADS MUST BE PLACED BETWEEN THE ARTIFACT AND THE SUPPORTS.
6. ALL OF THE SURFACE RUST AND SURVIVING PAINT MUST BE REMOVED BY MECHANICAL CLEANING USING AIR ABRASION WITH WALNUT SHELL MEDIA. THE CONTRACTOR MUST FOLLOW THE TECHNIQUES SET FORTH IN THE GENERAL REQUIREMENTS TO DETERMINE THE CORRECT PSI.
7. THE SURFACES MUST BE PRIMED WITH PHOSPHORIC ACID AND TANNIC ACID. THE CONTRACTOR MUST FOLLOW THE TECHNIQUES SET FORTH IN THE GENERAL REQUIREMENTS TO DETERMINE THE CORRECT CONCENTRATIONS OF EACH ACID.
8. AT LEAST ONE COAT OF PHOSPHORIC ACID AND THREE COATS OF TANNIC ACID MUST BE APPLIED. THE CONTRACTOR MUST WAIT UNTIL THE TREATED AREAS ARE FULLY DRY AND MUST THOROUGHLY INSPECT THE AREAS BETWEEN APPLICATIONS. ADDITIONAL APPLICATIONS OF TANNIC ACID MAY BE NEEDED IF THE ARTIFACT IS NOT FULLY BLACK.
9. THE CONTRACTOR MUST FILL HOLES ON THE TOP OF THE FLYWHEEL WITH AN INERT MATERIAL.
10. VERTICAL CRACKS IN THE ENCASEMENT MUST BE SEALED WITH SIKAQUICK® VOH (OR EQUIVALENT). HORIZONTAL CRACKS IN THE ENCASEMENT MUST BE REPAIRED USING SIKADUR® 35, HI-MOD LV AND SIKACRYL® READY-MIX CONCRETE PATCH OR EQUIVALENTS. THE SEAM BETWEEN THE CONCRETE ENCASEMENT AND THE FLYWHEEL MUST BE SEALED USING SIKAFLEX® 11 FC OR SIKAFLEX® 1A. PRIOR TO APPLYING THE EPOXY, THE AREA MUST BE CLEANED AND RUST/SCALE REMOVED. THE CONCRETE SURFACE MUST BE DUST FREE. THE CONCRETE SURFACE MUST BE DUST FREE. THE CONCRETE MUST BE THOROUGHLY DRIED BEFORE SEALING. SEALING OF THE ENCASEMENT MUST BE COMPLETED FOLLOWING REPAIR OF THE CRACKS. THE CONCRETE MUST BE ALLOWED TO DRY TWO DAYS PRIOR TO APPLYING THE SEALANT. DURING THIS DRYING TIME THE TEMPERATURE MUST BE MAINTAINED BETWEEN 50 AND 90 DEGREES FAHRENHEIT AND THE RELATIVE HUMIDITY MUST BE BELOW 70 PERCENT. THE AMOUNT OF DRYING TIME REQUIRED AFTER THE SEALANT HAS BEEN APPLIED MUST BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
11. COMPLETE COATINGS OF PAINT MUST BE APPLIED TO THE EXPOSED PORTIONS OF THE ARTIFACT TO PREVENT MOISTURE AND CHLORIDES FROM PENETRATING THROUGH THE LAYERS. THE PAINT MUST BE LATEX BASED. AT LEAST TWO COATINGS OF NEUTRAL BLACK MATTE (OSHA APPROVED) DIRECT TO METAL (DTM) SAFETY PAINT MUST BE APPLIED TO THE ARTIFACT. THE PAINT MUST BE AN INDUSTRIAL GRADE PAINT RATED FOR EXTERIOR USE ON METALS SUCH AS BENJAMIN MOORE®, ULTRA SPEC (LATEX) DTM HP25 OR EQUIVALENT. THE CONTRACTOR MUST WAIT AT LEAST ONE DAY AND UNTIL THE PAINT IS FULLY DRY AND INSPECT THE ARTIFACT BEFORE APPLYING ADDITIONAL COATS. MORE THAN TWO COATS MAY BE NECESSARY IF ALL AREAS OF THE ARTIFACTS ARE NOT FULLY COVERED.

SUPPORTS TREATMENT:
1. THE ENTIRE SUPPORTS MUST BE CLEANED MECHANICALLY WITH AN AIR ABRASION SYSTEM.
2. A HIGHLY FLOWABLE EPOXY GROUT SUCH AS SIKADUR® 35, HI-MOD LV OR EQUIVALENT MUST BE INJECTED UNDERNEATH THE BASEPLATES.
3. THE SUPPORTS MUST BE TREATED WITH RUST INHIBITORS.
4. COMPLETE COATINGS OF PAINT MUST BE APPLIED TO THE SUPPORTS TO PREVENT MOISTURE AND CHLORIDES FROM PENETRATING THROUGH THE LAYERS. THE PAINT MUST BE LATEX BASED. AT LEAST TWO THICK COATINGS OF GREY (OSHA APPROVED) DIRECT TO METAL (DTM) SAFETY PAINT MUST BE APPLIED. THE PAINT MUST BE AN INDUSTRIAL GRADE PAINT RATED FOR EXTERIOR USE ON METALS SUCH AS BENJAMIN MOORE®, ULTRA SPEC (LATEX) DTM HP25 OR EQUIVALENT. THE CONTRACTOR MUST WAIT AT LEAST ONE DAY AND UNTIL THE PAINT IS FULLY DRY AND INSPECTED BEFORE APPLYING ADDITIONAL COATS. MORE THAN TWO COATS MAY BE NECESSARY IF ALL AREAS OF THE SUPPORTS ARE NOT FULLY COVERED.

CONCRETE PAD TREATMENT:
1. ANY CRACKS IN THE CONCRETE MUST BE REPAIRED USING SIKADUR® 35, HI-MOD LV OR EQUIVALENT.
2. THE CONCRETE PADS MUST BE CLEANED AND ALLOWED TO FULLY DRY BEFORE BEING PAINTED. PLANS OUTLING THE METHOD THAT WILL BE USED FOR THOROUGHLY DRYING THE CONCRETE MUST BE PREPARED AND SUBMITTED TO THE USACE PRIOR TO BEGINNING WORK.
3. COMPLETE COATINGS OF PAINT MUST BE APPLIED TO THE CONCRETE TO PREVENT MOISTURE AND CHLORIDES FROM PENETRATING THROUGH THE LAYERS. THE PAINT MUST BE LATEX BASED. AT LEAST TWO THICK COATINGS OF GREY (OSHA APPROVED) DIRECT TO METAL (DTM) SAFETY PAINT MUST BE APPLIED. THE PAINT MUST BE AN INDUSTRIAL GRADE PAINT RATED FOR EXTERIOR USE ON METALS SUCH AS BENJAMIN MOORE®, ULTRA SPEC (LATEX) DTM HP25 OR EQUIVALENT. THE CONTRACTOR MUST WAIT AT LEAST ONE DAY AND UNTIL THE PAINT IS FULLY DRY AND INSPECTED BEFORE APPLYING ADDITIONAL COATS. MORE THAN TWO COATS MAY BE NECESSARY IF ALL AREAS ARE NOT FULLY COVERED.

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US Army Corps of Engineers®

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CHECKED BY: MK
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SOLICITATION NO.: XXXXXX-XX-X-XXXX
CONTRACT NO.: W912DQ-D-15-3011

U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

AECOM
100 RED SCHOOLHOUSE RD
CHESTNUT RIDGE, NY

ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

FLYWHEEL RESTORATION DETAILS

SHEET ID
X-106

100% DESIGN

LA TORNEAU PHOTOS

LA TOURNAEU TREATMENT:

1. TREATMENT MUST BE CONSISTENT WITH THE *SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES* (2017).
2. LIFTING PLANS MUST BE PREPARED AND SUBMITTED TO THE USACE PRIOR TO BEGINNING WORK.
3. THE WORK AREA MUST BE CLEARLY DEFINED WITH BARRIERS AND ENCLOSURES TO PROTECT THE PUBLIC FROM ANY OF THE COMPONENTS OF THE RESTORATION PROCESS. LINERS AND FILTRATION SYSTEMS MUST BE USED TO COLLECT ANY MEDIUM THAT BECOMES AIRBORNE DURING THE RESTORATION PROCESS (E.G., AIR ABRASION MEDIA, RUST, ACIDS AND PAINT) FOR REMOVAL FROM THE SITE.
4. THE ARTIFACT MUST BE LIFTED USING AN APPROPRIATELY SIZED CRANE. MODERN SUPPORTS MUST BE INSTALLED IN ACCORDANCE WITH THE S-200 and S-201 DESIGN DRAWINGS AND TEFLON PADS MUST BE PLACED BETWEEN THE ARTIFACT AND THE MODERN SUPPORTS. THE ARTIFACT MUST BE PLACED ON THE SUPPORT SO THAT IT IS 4 TO 5 INCHES OFF THE GROUND.
5. THE ENTIRE SURFACE OF THE ARTIFACT MUST BE PRESSURE WASHED AT A LOW PSI TO REMOVE DIRT AND DEBRIS.
6. THE SURFACES MUST BE PRIMED WITH PHOSPHORIC ACID. THE CONTRACTOR MUST FOLLOW THE TECHNIQUES SET FORTH IN THE GENERAL REQUIREMENTS TO DETERMINE THE CORRECT PERCENTAGES OF EACH ACID.
7. AT LEAST ONE COAT OF PHOSPHORIC ACID MUST BE APPLIED. THE CONTRACTOR MUST WAIT UNTIL THE TREATED AREAS ARE FULLY DRY AND MUST THOROUGHLY INSPECT THE AREAS BETWEEN APPLICATIONS. ADDITIONAL APPLICATIONS OF ACID MAY BE NEEDED TO ACHIEVE THE DESIRED PROTECTION.
8. THE INTERIOR OF THE CAB MUST BE WIPED CLEAN. THE CAB AND INTERNAL COMPARTMENTS MUST BE SEALED WITH CUSTOM GASKETS TO ENSURE THAT WATER CANNOT REACH THE INTERIOR COMPONENTS. ALL THE DOORS AND COMPARTMENTS MUST BE SEALED WITH CUSTOM GASKETS AND LOCKED.
9. THE TIRES MUST BE RETREAD.

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US Army Corps of Engineers®

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SIZE: ANSI D

U.S. ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

AECOM
100 RED SCHOOLHOUSE RD
CHESTNUT RIDGE, NY

ROEBLING STEEL SUPERFUND SITE
OPERABLE UNIT 4
EXISTING MILL YARD EQUIPMENT

FORKLIFT (LA TOURNEAU) RESTORATION DETAILS

SHEET ID

X-107

100% DESIGN